Projects:
Primary Transport
Newsletter Project
BP LPG UK intranet

Francisca Sobrinho Simões de Sousa Magalhães

Tutors:
Laura Irvine – BP LPG UK Marketing Manager
Prof. José António Sarsfield Cabral - FEUP

Final Report

Licenciatura em Gestão e Engenharia Industrial
Faculdade de Engenharia da Universidade do Porto
2001-10-29
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O estágio realizado em Bristol na BP LPG UK foi dividido em três fases/projectos. O primeiro e o segundo projecto foram desenvolvidos pela Sílvia e por mim igualmente, enquanto que no terceiro foram divididas tarefas.

Este relatório apresenta uma descrição em inglês dos três projectos, incluindo, também, como anexos o Manual Técnico e o Manual do Utilizador da base de dados à frente explicada.

Na primeira página, antes do sumário, está anexado o parecer da Laura Irvine (orientadora na BP) relativamente ao estágio.

A primeira fase do estágio compreendeu um trabalho na área da Logística (Transporte Primário). O projecto consistiu numa análise de custos/benefícios no aumento da capacidade de transporte de gás (camiões de 38 toneladas ou 44). Para minimizar os custos foram estudados as várias possibilidades de turnos e por fim decididos quantos camiões comprar. Depois do estudo, as conclusões foram: 1ª-A BP LPG UK pode diminuir o número de camiões em actividade no Verão. 2ª-A BP LPG UK necessita, urgentemente de adquirir camiões novos (os em actividade têm pelo menos 25 anos). 3ª-A BP LPG UK Avonmouth fornece em média 14 clientes no Inverno quando tem a possibilidade de fornecer 26 (se o gás for suficiente). 4ª-Numa análise custo/semana a diferença entre os camiões de 38 toneladas e os de 44 é de £1.31. Assim, numa análise anual a diferença de custos poderá ser de -£3,047.82.

No ponto de vista financeiro a melhor solução será a compra de novos camiões de 44 T. No entanto, no ponto de vista de investimento a compra pode não ser o mais rentável visto poderem existir outros negócios mais lucrativos.

O segundo projecto foi escrever e estruturar uma “Newsletter” sobre problemas ambientais que era parte integrante de uma campanha de sensibilização interna (BP LPG UK). Os resultados não podiam ter sido melhores, ou seja, a maioria dos empregados da BP LPG UK respondeu às questões inseridas na “Newsletter” e toda a informação captada revelou uma tentativa de mudança nos hábitos dos funcionários.
O terceiro e último projecto baseou-se na construção de um site para a Intranet da BP LPG UK. A arquitectura do site foi desenhado e os menus foram criados pela Silvia e por mim. Após estas fases o projecto prosseguiu em duas áreas diferentes: criação do site (interfaces e “links”) e construção de uma base de dados.

O meu trabalho específico foi construir a base de dados que compreende informação sobre: empregados, escritórios, departamentos e reuniões. Os objectivos da construção da base de dados foram: organizar a informação, criar facilidades na introdução e na pesquisa de informação, construir um calendário dinâmico e criar um processo de marcação de reuniões “on line”.

O programa de apoio foi o Access e as linguagens de programação utilizadas foram o SQL e o Visual Basic.

Os resultados foram óptimos pois os objectivos principais foram atingidos e o “feedback” foi muito positivo.
To Whom It May Concern,

Francisca Magalhaes

Francisca has taken on a challenging task in creating an interactive database for BP LPG and has delivered a solution that is technically complex but essentially simple for the users. Francisca has shown strong commitment to the project and has developed her skills extensively through self-learning and intelligent questioning. It has been a pleasure to work with Francisca as she responds well to comments and works with diligence and accuracy.

Laura Irvine
5th September 2001
Summary

The traineeship at BP LPG in Avonmouth was divided in three projects. Silvia and I developed the first and the second projects equally. The third one comprehended several parts and it was divided in different activities.

The first one involved a small project about primary transport. The project consisted on a costs/benefits analysis where transportation fleet's size could increase from 38 to 44 Tonne. In order to minimize total delivery costs were optimised number of shifts and ultimately decided on how many trailers to buy. After the study the conclusions were: 1\textsuperscript{st} BP LPG UK can decrease the numbers of trailers working in Summer months; 2\textsuperscript{nd} BP LPG UK needs to buy new trailers (the old ones are 25 years old); 3\textsuperscript{rd} BP LPG in Avonmouth has 14 customers but could increase to 26 if should there be enough gas in winter months; 4\textsuperscript{th} in a cost/week analyse the difference between 38 and 44T is £1.31. Therefore on a yearly basis, the overall financial savings would be £3,047.82 should BP buy 44Tonne trailers. Thus, from a financial point of view buying 44T trailers is the best choice, however from a business point of view is better to rent it.

The second project was creating a newsletter about environment's protection. This project was part of an awareness campaign (BP has developing regarding energy saving) and the results couldn't be better, that is, most of BP LPG UK employees answered the questions inside the newsletter and that data collected revealed that employees would try to change their habits.

The third project was building a BP LPG UK intranet. The site's architecture was designed and menus were created. This project was divided in two different parts: creating the site (interfaces and links) and building a database.

My specific job was building the database. This base comprehended BP LPG UK employees, depots, departments and data about meetings. The objectives of this project (database) were: organising data, creating facilities for
data introduction and data consulting, construing a dynamic calendar and creating a process to book meetings dynamically.

Access Programme was used to create the database and Visual Basic and SQL were the programming languages used.

The result was very good because all main objectives were reached and feedback couldn’t be better.
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Attachment 7 User's Manual
0 General Introduction

0.1 Company

BP

BP is the holding company of one of the world's largest petroleum and petrochemicals groups. Their main activities are exploration and production of crude oil and natural gas; refining, marketing, supply and transportation; and manufacturing and marketing of petrochemicals. BP has a growing activity in gas and power and in solar power generation. BP has well-established operations in Europe, North and South America, Australasia and Africa.

BP brand

Over the past few years, BP has changed and grown by bringing together several great companies. Consequently, the question arose: What do we call new company? The group chose to use the letters “bp”. It's a simple, straightforward name and is easy to remember. Above all, it can stand for new company's aspirations: bold people, better products, big picture, beyond petroleum. What more could describe Gas and Power.

Company has also created a new mark that's bright, bold and different. This is intentional. It's important for all of us, and for the world, to recognize that company is not going about business as usual. BP mark reflects determination to create products and services that respect human rights and the natural environment. In dynamic shades of green and yellow, BP mark represents growth. Its interlocking parts from one vibrant whole, symbolizing the collective power of our individual efforts. It also resembles the sun, a priority in our search for new sources of energy.

The new mark sets company apart from their competitors. This is deliberate. Now is the time for company to step of traditional roles and thinking, to be a catalyst for change. New mark is a daily reminder of this—a challenge to the world.
BP LPG UK

BP LPG UK has a large and varied national customer base including domestic, commercial, industrial and agricultural users of bulk or bottled LPG and autogas totalling nearly 20,000 direct customers and 100,000 users of bottled gas. BP has long been the largest supplier of liquefied petroleum gas into the UK market from its supply bases at Grangemouth, Coryton and Avonmouth and provides for 25% of the UK LPG consumption. BP now rivals Shell Gas for the Number 2 position in the UK LPG retail market having grown through acquisition and natural expansion to provide an integrated service across the whole of the UK. Key national accounts include the MOD, Bernard Matthews and the Corus group. BP also supplies LPG wholesale to major players such as Calor, Shell and British Gas.

BP bottled supplies of butane and propane are available through an extensive national dealer network which trades under the local names of Macgas, Border Gas and Handygas. BP supports this network with business planning specific to each dealer, which will include customer and cylinder management programmes to control growth.

For all BP LPG UK customers BP offer a service differentiated by customer responsiveness, which includes a top-up guarantee to ensure continuous supplies. BP works within the LPG Association to set and maintain safety levels throughout the industry. BP is also pioneering the use of e-commerce in the selling and administration of LPG supplies.

BP LPG UK-Avonmouth

There are 15 branches of BP LPG distributed throughout United Kingdom. The traineeship took place in Avonmouth, a small village near Bristol, on Wessex County (about 180 km west from London).

In Avonmouth BP LPG consists of Head Office and Terminal.
The Head Office has about 30 employees in Administration, Finance, Marketing, Technical and Operational departments.

The Terminal is 1 km away from Head Office in Avonmouth Docks where lorries get the gas, Butane and Propane, from the spheres. The majority of Terminal employees belong to Operational Department.

LPG

L.P.G. Liquified Petroleum Gas
L.P.G. can very often be miss quoted as:
-LOW PRESSURE GAS
-LIQUIFIED PETROLEUM GAS

LPG is a fuel that is obtained during the manufacture of petrol from crude oil or direct from the North Sea. It has a big advantage over mains gas in that it can be stored as a liquid in special containers and transported to almost anywhere to be used. At atmospheric pressure liquefied petroleum gases revert to the gaseous state. Liquid butane and propane or a mixture of the two is used extensively in areas where there is no natural gas service. When the valve on the "bottle" or small tank of butane, for example, is opened, releasing the pressure on the liquid, a small quantity of liquid "boils" or turns to a gas and can then be used just as natural gas for cooking or heating.

LPG is a very efficient and environmentally friendly fuel with high calorific value and negligible sulphur or metal pollutants. It is therefore well suited to processes that require high purity. LPG provides a convenient means to power heating, cooking, and other processes regardless of location. However the major growth area in the LPG market is automotive use of LPG - commonly referred to as autogas. BP is the UK market leader in autogas with the largest retail forecourt presence and also a network of reseller and homebased autogas refuelling points.
0.2 Project

The traineeship at BP LPG in Avonmouth was divided in three projects. Silvia and I developed the first and the second projects equally. The third one comprehended several parts and it was divided in different activities such as database and interfaces.

The three different projects are:

Primary Transport Project (Distribution)
Newsletter Project (Communication)
BP LPG UK intranet Project (Communication)
1 Primary Transport Project

1.1 Introduction

This project consisted on a study in order to analyse costs and benefits should Transportation Fleet's size at BP Gas in Avonmouth increase from 38 to 44 Tonne.

1.2 Objectives

The objective of this study was to minimise total delivery costs, therefore:
-Optimising number of shifts;
-Deciding on whether to buy new trailers or lease them;
-Deciding on how many trailers to buy.

1.3 Assumptions

-Demand will be the same for the next years
-BP gas in Avonmouth has 27 fixed customers
-All customers’ sites can receive 44 T lorries
-In winter, there is no shortage of gas to delivery
1.4 Report

The present situation

1.4.1 Seasonality Analysis

<table>
<thead>
<tr>
<th>Month</th>
<th>Volume</th>
<th>£/Te</th>
<th>Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan-98</td>
<td>4.377</td>
<td>9.1</td>
<td>4</td>
</tr>
<tr>
<td>Feb-98</td>
<td>3.698</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Mar-98</td>
<td>3.119</td>
<td>14.1</td>
<td>4</td>
</tr>
<tr>
<td>Apr-98</td>
<td>2.859</td>
<td>11.9</td>
<td>4</td>
</tr>
<tr>
<td>May-98</td>
<td>2.6</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>Jun-98</td>
<td>2.299</td>
<td>13.5</td>
<td>4</td>
</tr>
<tr>
<td>Jul-98</td>
<td>1.745</td>
<td>14.5</td>
<td>3</td>
</tr>
<tr>
<td>Aug-98</td>
<td>1.717</td>
<td>15.1</td>
<td>4</td>
</tr>
<tr>
<td>Sep-98</td>
<td>2.592</td>
<td>12.2</td>
<td>4</td>
</tr>
<tr>
<td>Oct-98</td>
<td>2.363</td>
<td>12.4</td>
<td>4</td>
</tr>
<tr>
<td>Nov-98</td>
<td>2.888</td>
<td>11.1</td>
<td>4</td>
</tr>
<tr>
<td>Dec-98</td>
<td>4.992</td>
<td>11.2</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 1

Graphic 1
From graphic 1 reading, July and August are selected months regarding gas distribution volume thus BP works with minus one vehicle in July. The introduction of the new law, a bigger capacity is allowed, that is 44 T vehicles means that in Summer months BP could stop leasing Wincanton more than just one vehicle, consequently costs would be lower.

As already stated, the placement started with a logistic project. Decision had to be taken: BP should buy new trailers or BP should rent extra ones. From the given data, graphic and table, at present BP rents all trailers from Wincanton. In UK a new law stating that Gas lorries can transport 44 T instead 38 T. If BP rents new lorries from Wincanton or another company BP will have to pay more than proportionally as the leaser company will have to invest in new lorries.

1.4.1.1 Current Fleet Size

Today, BP Gas has in Avonmouth five big lorries for the deliveries:

- 3 x 38 Tonne GVW
- 1 x 41 Tonne GVW
- 1 x 44 Tonne GVW.

Notice that the 3 x 38 lorries are already over 35 years old, so their replacement is urgent.

1.4.1.2 The Customers

BP LPG in Avonmouth has 27 customers at different sites, throughout UK, although most of them are not supplied weekly. The customers' list is different week by week and reaches the terminal every Thursday, when it is analysed and deliveries are decided,

An example of this list is in attachment 1
1.4.1.3 The Rental Company

Wincanton is a rental company that works with BP Avonmouth, and BP rents from them the units and the drivers, as well as their managing services. Invoice from Wincanton is in attachment 2

1.4.2 Costs And Solutions Analyses

1.4.2.1 BP Gas Perspective

For BP, buy/lease new Trl 203 it's not an option, but a need. The main questions are:
- How to do it (buy/lease)?
- If buying, how many (two or three)?

This change can help the service in primary transport to become more efficient, but deliveries that BP are doing today have to change.

1.4.2.2 Customer Base

<table>
<thead>
<tr>
<th>Month</th>
<th>Demand</th>
</tr>
</thead>
<tbody>
<tr>
<td>February</td>
<td>4249</td>
</tr>
<tr>
<td>March</td>
<td>4173</td>
</tr>
<tr>
<td>April</td>
<td>3000</td>
</tr>
<tr>
<td>May</td>
<td>2950</td>
</tr>
<tr>
<td>June</td>
<td>2162</td>
</tr>
<tr>
<td>July</td>
<td>1991</td>
</tr>
<tr>
<td>August</td>
<td>2133</td>
</tr>
<tr>
<td>September</td>
<td>2311</td>
</tr>
<tr>
<td>October</td>
<td>2846</td>
</tr>
<tr>
<td>November</td>
<td>3635</td>
</tr>
<tr>
<td>December</td>
<td>3370</td>
</tr>
<tr>
<td>Total</td>
<td>32820</td>
</tr>
</tbody>
</table>

Table 2
Graphic 2

<table>
<thead>
<tr>
<th>Tonne Payload</th>
<th>Number of Trips</th>
<th>Reduce/Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Capacity</td>
<td>92</td>
<td>357</td>
</tr>
<tr>
<td>Capacity Solution A</td>
<td>113</td>
<td>290</td>
</tr>
<tr>
<td>Capacity Solution B</td>
<td>90</td>
<td>365</td>
</tr>
</tbody>
</table>

Table 3

On observing table 3 Solution A presents a decrease in 19% in the number of trips to major clients and Solution B presents an increase of 2%. Although Solution A appears to be better, at this stage were considering both alternatives (A and B).

1.4.2.3 Customers Sites

One of the main issues about changing the 3 x 38T to 44T was the customers’ site, that is, whither they could receive 44T. The studies carried out revealed that there are no major problems:
- All the Handy Gas sites are ready to receive the deliveries in the new 44 Tonne vehicles.
- The other customers can receive too, the new 44 Tonne vehicles.

1.4.2.4 Changing The Routings

To optimise the service in the primary transport, it’s necessary to change the way deliveries are made. There’s an example, with customer MOD, that could be presented: When a Tri 203 goes to a Handy Gas site, why not keep making deliveries after, going to some MOD’s sites (that are very close), and there come back to the station.

This question was presented to Derek Marshall, and his answer was that most of the MOD’s sites aren’t able to receive a 44 Tonne vehicle an exception in the study carried out. However, other possibilities could be measured.

1.4.2.5 Number Of Shifts

At present, there are single and double shifts. Why not making three shifts possible?

If BP worked 24 hours a day, seven days a week, it would, certainly have bigger profits; but there are some barriers:

- There’s not enough gas to deliver;
- BP would have to contract more drivers;
- The sites would have to be open 24 hours a day;

The last constraint could be overcome:
- If BP created a security system for all costumers’ sites, such as surveillance central system and cameras in all sites. This solution would not bring additional costs to clients enabling BP to function 24 hours a day.

Some combinations are represented in attachment 3.
1.4.2.6 Leasing Vs Buying The Trailers

The cost of leasing/renting from Wincanton the Trl 203 (44 Tonne GVW), is near £100,000, which would be paid throughout the contract with 2% year increase. This number is not exact, because for Wincanton, buying the Trl 203 for gas deliveries is a completely new situation.

In this situation, BP costs (standing charges, vehicle excise duty costs) would remain the same, except for the management costs that would increase and, of course the monthly payment that BP would have to pay for the tank.

BP has to notice that:

- This is a new situation for Wincanton, so if there would be a contract it could have to be discussed, and maybe Wincanton would have a different opinion about costs;

- The contract would be too risky for Wincanton, because BP is the only client with gas deliveries. However, if BP broke the contract with Wincanton at any time would have to support tank costs.

On the other hand:

- In summer months BP could keep the tanks stopped at Wincanton with no additional costs (the tanks need no maintenance);

- The depreciation of the tank wouldn’t be a BP problem, and over the years as the tank depreciate, BP would pay less to Wincanton.

During the conversation with Wincanton, they said that it’s easier if BP keeps buying their own tanks, because they feel that it’s not a good business for Wincanton to buy a tank that has only use for one client.
1.4.2.7 Buy or Lease/Rental from Contractor

The cost of buying Trl 203 is £90,000, and lease/rent from Wincanton would be £100,000. The main difference between the two options is:

- For BP, to buy the Trl 203 it means investing in this direction therefore loosing other investment opportunities.
- To lease from Wincanton, through expenses would be higher, there would be no need for direct investment.

1.5 Comments

Along the conversations that we had with most of the people involved in the business, the better option from an accounting point of view would be buying the Trl 203 instead of renting it. However the main question remains, wouldn't it be more profitable for BP, to invest in other areas?

1.6 Conclusions

- Seasonal use of vehicles: with the Trl 203 the number of vehicles stopped, during lower demand months, can be increased at least by one unit.

- Vehicles in use: since the average age of a 38 Tonne is 25 years, it is urgent to replace them.

- The list of customers is now 14 customers. Through there are 26 recorded clients only an average of 14 can be supplied permanently owing to insufficient gas at the terminal during winter time.

- The cost/week difference between a 38 tonne (BP owned) and a 44 tonne (contract) is £1.31 (£7.57 for the 38 and £6.26 for the 44).
• In terms of capacity is possible to replace the 3 x 38 for 2 x 44, and reducing in cost/week would be £1,099.41.

• There are no major problems from our customers (primary transport) to receive deliveries from the Tri 203.

• Working 24 hours per day is possible if BP creates it's own security system for deliveries, like for example security video cameras and surveillance.

• On a yearly basis, if the fleet went to 44 Tonne, the overall financial savings would be £3,047.82.

• From a financial point of view, buying the Tri 203 is a better choice, through from a business point of view is better to rent it.
2 Newsletter Project

2.1 Introduction and Objectives

The newsletter project is part of a BP campaign and its objective is to alert all employees to environmental problems.

2.2 Main Part

The first step was to understand the meaning of this awareness campaign. The design and the text within were the second step. Some employees gave their opinion about newsletter and some things were changed. On the newsletter a prize competition was introduced for the more original idea about awareness campaign.

After, the prototype was sent to the office for reproduction and finally the newsletter was delivered.

The newsletter is in attachment 4

2.3 Feedback

The feedback couldn't be better because everybody said that the idea was very good and that they would try to change their habits. We also received some good ideas from the prize competition.

2.4 Conclusion

- A new edition had to be printed;
- We received good ideas for the next edition;
- BP employees said that they would try to change their habits.

As you can see the main objective was reached: "to alert all employees to environmental problems". So, the campaign was a success!
3 BP LPG UK Intranet Project

3.1 Introduction

BP LPG UK has been improving internal communication. As a consequence of its geographical units spread, the intranet is the best way to develop this project.

Depots divide BP LPG UK and the contact between different staff is commune. To minimize "distance" BP LPG UK intranet pages were created regarding staff, depots, and meetings information.

This project consisted in creating BP LPG UK intranet where all BP employees can search for anything related with communication and human resources.

3.2 Objectives of BP LPG UK Intranet

- Studying BP LPG UK personal main necessities;
- Organising BP LPG UK information and show it on BP LPG UK intranet;
- Creating one database within staff, meetings, depots and departments information of BP LPG UK;
- Drawing site's architecture;
- Building BP LPG UK intranet using bp.com parameters;
- Doing a project that anyone can continue on future.

3.3 Activities

In communication area my job was based on building a database to BP human resources. First, our team (Silvia and I) started designing intranet site's architecture, having in mind relevant and interesting information. My next step was creating an intranet database that could be useful to BP staff. This database is essentially supported by staff, depots', departments' and meetings' information.
Any web site needs to have a database that can be updated at anytime and every time you are working on it. BP LPG UK intranet isn't an exception. I tried to put there all relevant information like BP employees' profiles, depots' and departments' information and management meetings.

BP database has as main objective to manage all data and display it on line. Database was built with Access Programme and the computer's languages used were Visual Basic and SQL.

3.3.1 **Objectives of Database**

- Organising all employees, depots and departments data
- Creating facilities for data introduction
- Creating facilities for data consulting
- Doing a dynamic calendar
- Creating a process to book meetings dynamically

3.3.2 **Organisation**

The first step to do a database is deciding what to put there. Several objects had to be created and related when using "Access" such as: tables, queries, forms and modules.

The information within the different objects is about:

- employees
- departments
- depots
- meetings

**Tables**

BP database (LPGstud2) has 5 tables: T_employee, T_depot, T_department, T_meeting and T_room.
T_employee's fields are:

Employee code
Employee first name
Employee last name
Employee birth date
Employee address
Employee postcode
Employee phone
Employee e-mail
Employee insurance number
Employee job title
Employee curriculum vitae
Employee first day at job
Employee department code
Employee depot code
Employee photo

T_depot's fields are:

Depot code
Depot name
Depot address
Depot city
Depot postcode
Depot country
Depot phone
Depot fax
Depot map
Depot activity
Depot news
Depot timetable
Depot equipment
T_department's fields are:

- Department code
- Department name
- Department goals
- Department news
- Department projects and initiatives

T_meeting's fields are:

- Meeting code
- Meeting name
- Meeting date
- Meeting am or pm
- Meeting beginning time
- Meeting ending time
- Meeting room name
- Meeting equipment
- Meeting logon
- Meeting password

T_room's fields are:

- Room code
- Room name
- Room capacity
- Room depot code
- Room comments
Tables' Relationships:

Figure 1

Queries

Queries were created to support most forms and combo boxes. An example is:

To search for any meeting you can fill one or more fields of a questionnaire. Those fields are related with a query (figure 2 and 3).

Figure 3

Forms

Forms are utilised as interfaces. Forms support all pages that you can open.

Figure 2 and 3 are an example of a form when it was being built.
Figure 2

Query:

Figure 3

*Forms*

Forms are utilised as interfaces. Forms support all pages that you can open.

Figure 2 and 3 are an example of a form when it was being built.
Figure 4

Figure 4 is an example of a form with queries supported by tables.

Note: There are some forms with neither queries nor tables: calendar form (figure 5) is an example:
As you can see, F_calendar fields are independent; it means that there is not support for any object.

This is a dynamic calendar and its body is written on visual basic language in Access.

See code in attachment 5

All forms are related with visual basic code. This project is essentially a programming project.

Tree Menus

When database is opened we have to choose a menu.
**BP LPG UK database Modules**

BP LPG UK database is divided in four modules:

**Employees**
- Add/Edit/Delete employees
- Employee's profile
- Search for an employee by first name, last name, job title, depot and department.
Meetings

- Book new meetings (associating one username and one password)
- Edit/Delete meetings (with one username and one password)
- Rooms’ affecting
- Meeting's details
- Search for a meeting by meeting's name, date or depot.

Depots

- Add/Edit/Delete depots
- Equipments' affecting
- Rooms’ distribution
- Depot's staff
- Depot's details
- Search for depot’s details by depot’s name, depot’s activity, city or country.

Departments

- Add/Edit/Delete departments
- Department's Staff
- Department’s details
3.3.3 Conclusions of Database Project

The objectives were reached: Data was organised in tables, facilities for data introduction and consulting were created throughout the forms. A dynamic calendar was built and meetings can be booked dynamically at any moment.

Feedback couldn't be better, employees were very happy with the new system because bureaucracy was reduced.

Before this project employees had to phone to book any meeting and had to ask if a room was available. Now, booking a meeting is very easy and quick. The programme is dynamic, that is, at the same moment someone is booking, in another part of United Kingdom, some other employee knows that this specific room is busy.

At present it is also possible to know employees', depots or departments' details with just a few clicks! This is very important because as employees have to meet their colleagues they can know, before a meeting, the person they will face (security reasons).

This database is the first step for BP to update employees in new high technologies as those kind of programmes are easy to manipulate by the user.

Hope some day, someone will work with this database and develop and improve it.

3.4 Conclusions of Intranet Project

The site was built and all main objectives were reached: site's architecture was designed, BP LPG UK intranet was built using bp.com parameters, database was created so the project can be developed in the future.

We didn't see the real feedback, as when we left United Kingdom the site wasn't working at the server yet. However we ask some employees their opinion and they were unanimous that the idea was great and that site will simplify their professional life.

With this project, we left all the tools needed for someone to continue our work: the site, the database, the technical manual and the users manual.
4 Bibliography

Books:

- Running Access 97
- FrontPage
- Visual Basic in Easy Steps

Information kept from:

- Several sites in Internet and BP Intranet like www.bp.com or bp.lpg.uk.co.
- S:\common server.
- McGas newsletter (LPG properties).

Thanks to BP LPG UK staff and specially:

Laura Irvine
Martin Evans
Martin Welsh
Lynn Smith
Dave Hilman
Duncan Smith
Jude Payne
Nick Borek
Darren Clements
Pauline House
Stephen Carter
Dave Axford
Nicole Andrieu
Attachments

Project:
Primary Transport
## Customers’ list

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Maximum total trip: 13.5
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Double Shift Combinations

Maximum total trip: 13.5

 means that double shift is possible
 means that double shift is not possible
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Maximum total trip: 13.5

![image](image) means that double shift is possible
![image](image) means that double shift is not possible

Current Capacity 92
Capacity Solution A 113
Capacity Solution B 90
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<td>Port Talbot</td>
<td>5.6</td>
</tr>
<tr>
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<td>5.56</td>
</tr>
<tr>
<td>12</td>
<td>Carver Gas</td>
<td>Wolverhampton</td>
<td>7.46</td>
</tr>
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<td>Newport</td>
<td>4.1</td>
</tr>
<tr>
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<td>Devford</td>
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<td>Bridgewater</td>
<td>4.19</td>
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<tr>
<td>16</td>
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<td>Bridgewater</td>
<td>4.19</td>
</tr>
<tr>
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<td>Yeovil</td>
<td>5.36</td>
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<tr>
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<td>Yeovil</td>
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<tr>
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- # is redundant
- FALSO means that triple shift is possible
- FALSO means that triple shift is not possible

**Maximum total trip:** 13.5
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<tr>
<th>Number (n)</th>
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<th>Total trip</th>
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<td>BOWATER</td>
<td>Newport</td>
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<td>6</td>
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<td>Birmingham</td>
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<td>British Gas</td>
<td>Buckfastleigh</td>
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<td>St. Austell</td>
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<td>9</td>
<td>British Gas</td>
<td>Witney</td>
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<td>26</td>
<td>WBB LTD</td>
<td>Cornwood</td>
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<table>
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<tr>
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<th>8.54</th>
<th>8.52</th>
<th>8.61</th>
<th>8.45</th>
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<tbody>
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<td>15+15</td>
<td>16+16</td>
<td>5+13</td>
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<td>#</td>
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</tr>
<tr>
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<td>#</td>
<td>#</td>
<td>#</td>
<td>#</td>
<td>#</td>
</tr>
</tbody>
</table>

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- is redound
- # means that the triple shift is possible

Maximum total trip: 13.5
Attachment 4

Project:
Newsletter
 Totally committed to curbing energy use

MESSAGE FROM REGIONAL MANAGER:

NO ACCIDENTS
NO HARM TO PEOPLE
NO DAMAGE TO THE ENVIRONMENT

BP LPG UK Objectives:

- Buy fuels at most economic cost and use them as efficiently as possible.
- Reduce the amount of pollution, particularly CO2 emissions, caused by energy consumption.
- Reduce, wherever possible, the dependence on fossil fuels to move towards our common future of sustainable development.
- Identify other sources of energy where economically and environmentally acceptable.

Plan to cut energy spend by BP

BP LPG UK ENERGY TARGET:

- Gain control over energy consumption by reviewing and improving our purchasing, operating, motivation and training practises.
- Invest in energy saving measures which will maximise returns on investment which can be re-invested, at least in part, in further energy management activities.
- To carry out energy audits to our major energy consuming sites.

Benefits to BP LPG UK

- a reduction in Energy Costs.
- a greener public image

Benefits to staff

- a better environment for our children
- better working conditions

Benefit to customers

- a better environment

Benefits to the environment

- reduced CO2 emissions
- fossil fuels conserved
It's official global warming is here!

Global warming, sometimes called the greenhouse effect, is now official. Greenhouse gases such as carbon dioxide are produced by human activities, especially those involving energy consumption.

They are building up in the atmosphere and trapping solar radiation so raising the global temperature. Global warming has been on the international agenda since 1988 when the Intergovernmental Panel on Climate Change was set up. The top scientists on the Panel agree that man-made global warming is now detectable.

Panel members agree that, "The balance of evidence suggests a discernible influence on global climate". Sir John Houghton, former head of the UK's Meteorological Office and co-chairman of the Panel said, "We have reached a consensus about what we know and what we don't know. We believe we are beginning to understand this problem."

This century global temperatures have risen by 0.5°C and in the next century they could rise by 1.5°C to 4°C. "It is the most rapid rate of change we will have seen for 10,000 years", said Sir John.

A rise of 4°C by 2100 would mean sea levels rising half a metre. Diseases carried by insects and mites, such as malaria, could move out of the Tropics into temperate regions like North Europe as temperatures rise. But if CO₂ emissions can be cut by 50%, global warming could be held to only 2°C.

Key roles

As part of our campaign to eliminate waste in all aspects of our operations:

**Darren Clements** is in charge of developing energy awareness at our Avonmouth office.

**Willy Anderson** is responsible for developing energy awareness at our Rutherglen office.

**Graham Wiltshire** is advising on energy monitoring and management.

These staff members need your help if we are going to help achieve a Sustainable future for our children and future generations.

Energy facts

<table>
<thead>
<tr>
<th>Cost of energy 2000</th>
<th>£</th>
<th>Kwh</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avonmouth Depot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electricity</td>
<td>5,226</td>
<td>81922</td>
</tr>
<tr>
<td>Rutherglen Depot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metre 1</td>
<td>12,377</td>
<td>148152</td>
</tr>
<tr>
<td>Metre 2</td>
<td>1,242</td>
<td>14028</td>
</tr>
</tbody>
</table>

In brief

An open office window loses enough energy in a day to produce 250 fleece jackets.

A photocopier left on overnight wastes enough energy to make 800 A4 copies.

A PC monitor left on overnight wastes enough energy to print 800 A4 pages.

Lighting an empty office overnight wastes enough energy to heat enough water for 1000 cups of tea.
Helping the earth begins at home

Carbon dioxide (CO₂) is the biggest contributor to global warming and CO₂ is mainly emitted as a result of energy consumption. So every time you turn on your heating, switch on lights, heat water, cook, or use any gas or electrical appliance in your home, you are adding to the threat of global warming. Most of us are using much more energy than we need to and producing unnecessary CO₂ emissions. The average home uses enough energy to create 7.5 tonnes of CO₂ a year. Over a quarter of the CO₂ produced in the UK comes from energy used in the home. This figure increases to around 40% if you include the use of cars. If we cut energy use in our homes and cars, we reduce the CO₂ emissions that increase the risk of global warming.

Plans to cut heating costs

What we plan to do
- Switch off all unnecessary lighting inside and outside all our sites.
- Control office temperatures.
- Control hot / cold water systems.
- Put ALL pc’s and screens on timed shut down.
- Eliminate air conditioning costs.
- A simple information system to monitor use, and measure and report progress.

How you can help
- If you are too hot in the winter, telephone Darren or Willy, don’t open the window
- If you are last to leave your area switch off lights and pc’s.
  switch off toilet light and extract fans they have 10 minute run on timers.

<table>
<thead>
<tr>
<th>Action</th>
<th>Reason</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close any windows left open during the heating season</td>
<td>Increased heating cost due to an open window (3ft x 2ft) during heating season</td>
<td>+£14/day</td>
</tr>
<tr>
<td>Close any factory and office external doors left open during heating season</td>
<td>Increased heating cost due to an open door (12ft x 12ft) during heating season</td>
<td>+£34/day</td>
</tr>
<tr>
<td>Turn off any tap left trickling</td>
<td>Wasted water consumption from 1/2” tap</td>
<td>+£1.17/day</td>
</tr>
</tbody>
</table>

Turning your thermostat down by just 1°C can knock 10% off your heating bills and you’ll be unlikely to notice any difference in comfort. This won’t cost you anything and could save you £15-£40 a year.

Put aluminium foil behind any radiators fitted against outside walls to stop their heat going straight through the walls. Ordinary kitchen foil will do but you can buy specially designed foil from DIY stores. This will cost you less than £10 and could save you this much in the first year alone.

Most people with lofts have some form of loft insulation but often it isn’t thick enough. Six inches is the depth you need. It’s worth topping up your insulation if you have two inches (50mm) or less. This will cost you £110-£160 and could reduce your fuel bills by £60-£70 a year.
More heat is lost through the walls than any other part of the house. Yet only 20% of homes with cavity walls have cavity wall insulation. This costs between £300-£500 and could save you £60-£70 a year.

Fitting a thermostat on your water heating system can reduce your bills by around £10-£20 a year. This will cost you £80-£100 (or about half this if you fit it yourself).

Every year in the UK we consume 8% of our oil resources and 4% of our natural gas reserves. But fuel prices aren’t keeping pace with other price rises. The cost of domestic fuel has increased by just 11% in real terms since 1970 – mainly as a result of VAT at 8% in April 1994 – while real per capita incomes have increased by 65%. Transport fuel prices have only increased by 2%.

Energy consumption in the UK has remained fairly constant since 1970, despite a 60% increase in Gross Domestic Product. This has been attributed in part to the increase of world oil prices in the 1970s and 1980s. Most of the improvement has been in the manufacturing sector where energy consumption has fallen by 40%. The commercial sector is growing fastest in the UK and here consumption has risen by 15%.

Energy consumption in UK homes has risen by 20% since 1970, mainly because of the increase in the number of households. Fuel consumed by road transport has risen even more – up 90% since 1970. There has been no improvement in fuel efficiency over the past twenty years for passenger or freight transport, despite increases in the fuel efficiency of individual vehicles. In the longer term, as existing energy resources become scarcer, we can expect energy prices to rise, encouraging us to greater energy efficiency and boosting incentives to develop alternative sources.

BE ENERGY SMART FOR A BRIGHTER TOMORROW

Save Your Energy Competition

Look out for a competition, which will be circulated later in June to test your knowledge of energy saving at home and work. All correct entries will be put forward for a prize draw and winner will receive a:

FreePlay Wind Up Radio.

Good ideas protect the planet – spread them

Please send any comments, contributions or suggestions for articles to: Darren Clements for Avonmouth, Willie Anderson for Rutherglen and Graham Wiltshire for the other UK sites.

This newspaper is part of the “Running an awareness campaign” action pack produced by BRECSU on behalf of the Department of the Environment, Transport and the Regions.
Attachments

Project:
BP LPG UK Intranet
Option Compare Database
Option Explicit
Dim matrix_YEARS(11, 2) As Long
Dim matrix_MONTHS(12) As String
Dim matrix_MODELS(14, 3) As Byte
Dim matrix_SELECTED_YEAR(365, 31, 2) As String

Dim var_year As Long
Dim var_month As Byte
Dim var_day As Byte
Dim var_model As Byte
Dim var_february As Byte
Dim var_initial As Byte
Dim month_days As Byte
Dim week_day As Byte
Dim total_days As Long

Private Sub Form_open(cancel As Integer)

On Error GoTo Err_Form_Open

var_year = year(date)
var_month = month(date)
var_day = Day(date)

Label_day.Caption = date

' MODELS LOADING

' matrix_MODELS(0, 1) = MODEL
' matrix_MODELS(0, 2) = WEEK DAY OF THE FIRST DAY YEAR
' matrix_MODELS(0, 3) = FEBRUARY DAYS

matrix_MODELS(0, 0) = 1
matrix_MODELS(0, 1) = 7
matrix_MODELS(0, 2) = 28

matrix_MODELS(1, 0) = 2
matrix_MODELS(1, 1) = 1
matrix_MODELS(1, 2) = 28

matrix_MODELS(2, 0) = 3
matrix_MODELS(2, 1) = 2
matrix_MODELS(2, 2) = 28

matrix_MODELS(3, 0) = 4
matrix_MODELS(3, 1) = 3
matrix_MODELS(3, 2) = 28
matrix_MODELS(4, 0) = 5
matrix_MODELS(4, 1) = 4
matrix_MODELS(4, 2) = 28

matrix_MODELS(5, 0) = 6
matrix_MODELS(5, 1) = 5
matrix_MODELS(5, 2) = 28

matrix_MODELS(6, 0) = 7
matrix_MODELS(6, 1) = 6
matrix_MODELS(6, 2) = 28

matrix_MODELS(7, 0) = 8
matrix_MODELS(7, 1) = 7
matrix_MODELS(7, 2) = 29

matrix_MODELS(8, 0) = 9
matrix_MODELS(8, 1) = 1
matrix_MODELS(8, 2) = 29

matrix_MODELS(9, 0) = 10
matrix_MODELS(9, 1) = 2
matrix_MODELS(9, 2) = 29

matrix_MODELS(10, 0) = 11
matrix_MODELS(10, 1) = 3
matrix_MODELS(10, 2) = 29

matrix_MODELS(11, 0) = 12
matrix_MODELS(11, 1) = 4
matrix_MODELS(11, 2) = 29

matrix_MODELS(12, 0) = 13
matrix_MODELS(12, 1) = 5
matrix_MODELS(12, 2) = 29

matrix_MODELS(13, 0) = 14
matrix_MODELS(13, 1) = 6
matrix_MODELS(13, 2) = 29

' YEARS LOADING

matrix_YEARS(0, 0) = 2000
matrix_YEARS(0, 1) = 14
matrix_YEARS(1, 0) = 2001
matrix_YEARS(1, 1) = 2
matrix_YEARS(2, 0) = 2002
matrix_YEARS(2, 1) = 3
matrix_YEARS(3, 0) = 2003
matrix_YEARS(3, 1) = 4
matrix_YEARS(4, 0) = 2004
matrix_YEARS(4, 1) = 12
matrix_YEARS(5, 0) = 2005
matrix_YEARS(5, 1) = 7
matrix_YEARS(6, 0) = 2006
matrix_YEARS(6, 1) = 1
matrix_YEARS(7, 0) = 2007
matrix_YEARS(7, 1) = 2
matrix_YEARS(8, 0) = 2008
matrix_YEARS(8, 1) = 10
matrix_YEARS(9, 0) = 2009
matrix_YEARS(9, 1) = 5
matrix_YEARS(10, 0) = 2010
matrix_YEARS(10, 1) = 6

' MONTHS LOADING

matrix_MONTHS(0) = "JANUARY"
matrix_MONTHS(1) = "FEBRUARY"
matrix_MONTHS(2) = "MARCH"
matrix_MONTHS(3) = "APRIL"
matrix_MONTHS(4) = "MAY"
matrix_MONTHS(5) = "JUNE"
matrix_MONTHS(6) = "JULY"
matrix_MONTHS(7) = "AUGUST"
matrix_MONTHS(8) = "SEPTEMBER"
matrix_MONTHS(9) = "OCTOBER"
matrix_MONTHS(10) = "NOVEMBER"
matrix_MONTHS(11) = "DECEMBER"

Combo_year = var_year

Combo_month = matrix_MONTHS(var_month - 1)

loading_matrix_year (var_year)

month_display (var_month)

Exit_Form_Open:
   Exit Sub
Err_Form_Open:
   MsgBox Err.Description
   Resume Exit_Form_Open

End Sub

Private Sub Combo_month_Change()
On Error GoTo Err_CombO_month_Change
month_display (Combo_month.Column(1))

Exit_CombO_month_Change:
Exit Sub
Err_CombO_month_Change:
MsgBox Err.Description
Resume Exit_CombO_month_Change

End Sub
Private Sub Combo_year_Change()

On Error GoTo Err_CombO_year_Change
loading_matrix_year (Combo_year)
month_display (Combo_month.Column(1))

Exit_CombO_year_Change:
Exit Sub
Err_CombO_year_Change:
MsgBox Err.Description
Resume Exit_CombO_year_Change

End Sub

Function month_display(month As Byte)

On Error GoTo Err_month_display

Dim Cx, Dx As Long
Dim Control As Boolean
Dim label_position As Byte

Select Case month
  Case 1
    month_days = 31
  Case 2
    month_days = var_february
  Case 3
    month_days = 31
  Case 4
    month_days = 30
  Case 5
    month_days = 31
  Case 6
    month_days = 30
  Case 7
    month_days = 31
  Case 8

End Select
month_display = month_days

End Function
month_days = 31
Case 9
    month_days = 30
Case 10
    month_days = 31
Case 11
    month_days = 30
Case 12
    month_days = 31
End Select

'matrix SELECTED_YEAR(MONTH,WEEK DAY,MONTH DAY)

For Dx = 1 To 42
    Forms("F_calendar").Controls("label" & Dx).Caption = ""
Next
Control = True

For Dx = 1 To month_days

    If Control = True Then
        Forms("F_calendar").Controls("label" & matrix_SELECTED_YEAR(month - 1, Dx - 1, 0)).Caption =
        matrix_SELECTED_YEAR(month - 1, Dx - 1, 1)
        label_position = matrix_SELECTED_YEAR(month - 1, Dx - 1, 0)
        Control = False
    Else
        Forms("F_calendar").Controls("label" & label_position).Caption =
        matrix_SELECTED_YEAR(month - 1, Dx - 1, 1)
    End If
    label_position = label_position + 1
Next

Exit_month_display:
    Exit Function
Err_month_display:
    MsgBox Err.Description
    Resume Exit_month_display

End Function

Function loading_matrix_year(year As Long)

DoCmd.Hourglass True

Dim ax, Bx As Byte
total_days = 0
' FIND THE MODEL - matrix_YEARS(X,Y) - YEARS vs MODELS

For ax = 1 To 12

    If year = matrix_YEARS(ax - 1, 0) Then
        var_model = matrix_YEARS(ax - 1, 1)
    End If

Next

' MODEL ATTRIBUTES - matrix_MODELS(X,Y) - MODELS vs ( WEEK DAY
' OF THE FIRST DAY YEAR - FEBRUARY DAYS )

For ax = 1 To 14

    If var_model = matrix_MODELS(ax - 1, 0) Then
        var_initial = matrix_MODELS(ax - 1, 1)
        var_february = matrix_MODELS(ax - 1, 2)
    End If

Next

week_day = var_initial

For ax = 1 To 12

  Select Case ax
    Case 1
      month_days = 31
    Case 2
      month_days = var_february
    Case 3
      month_days = 31
    Case 4
      month_days = 30
    Case 5
      month_days = 31
    Case 6
      month_days = 30
    Case 7
      month_days = 31
    Case 8
      month_days = 31
    Case 9
      month_days = 30
    Case 10
      month_days = 31
    Case 11
      month_days = 31
  End Select
month_days = 30
Case 12
    month_days = 31
End Select

For Bx = 1 To month_days
    If ax = 1 And Bx = 1 Then
        week_day = var_initial
    End If

    If week_day > 7 Then
        week_day = 1
    End If

    matrix_SELECTED_YEAR(ax - 1, Bx - 1, 0) = week_day
    matrix_SELECTED_YEAR(ax - 1, Bx - 1, 1) = Bx

    week_day = week_day + 1
    total_days = total_days + 1
Next
Next

DoCmd.Hourglass False

End Function
Attachment 6

Technical Manual

Project:
BP LPG UK Intranet
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1 Introduction

The objective of this manual is to guarantee understanding and facility on database system implementation. The main target of the handbook is any professional that will work on BP LPG UK database.

2 Database's Content

BP LPG UK has been improving internal communications. As a consequence of geographical units spread in UK, the intranet is the best way to develop this project.

BP LPG UK is divided by depots and the contact between different staff is commute. To minimize the “distance” will be created in the BP LPG UK intranet pages about staff, depots, meetings, etc. This database is based essentially in staff information, depots’ information, departments’ information and meetings’ information.

3 Tables' Relationships
1. **T_employee**

   Primary Key: employee_code (auto number)
   It is related with T_department (one department to many employees) and T_depot (one depot to many employees)

2. **T_department**

   Primary Key: department_code (auto number)
   It is related with T_employee

3. **T_depot**

   Primary Key: depot_code (auto number)
   It is related with T_employee and T_rooms (one depot to many rooms)

4. **T_meeting**

   Primary key: date (date/time), am_pm (text) and room_name (text)
   It is related with T_rooms (one room to many meetings)

5. **T_room**

   Primary Key: room_name (text)
   It is related with T_depot (one depot to many rooms)

4. **Tables On The Third Normal Form**

   1. **T_employee**

```
<table>
<thead>
<tr>
<th>employee_code</th>
<th>first_name</th>
<th>last_name</th>
<th>date_of_birth</th>
<th>address</th>
<th>city</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post_code</td>
<td>country</td>
<td>home_phone</td>
<td>office_phone</td>
<td>mobile_phone</td>
<td></td>
</tr>
<tr>
<td>Insurance_number</td>
<td>job_title</td>
<td>curriculum_vitae</td>
<td>date_of_the_first_day_at_job</td>
<td></td>
<td></td>
</tr>
<tr>
<td>department_code</td>
<td>depot_code</td>
<td>Photo</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
```
### 2. T_department

<table>
<thead>
<tr>
<th>department_code</th>
<th>department_name</th>
<th>main_goals</th>
<th>news</th>
<th>projects_and_initiatives</th>
</tr>
</thead>
</table>

### 3. T_depot

<table>
<thead>
<tr>
<th>depot_code</th>
<th>depot_name</th>
<th>address1</th>
<th>address2</th>
<th>city</th>
<th>post_code</th>
<th>country</th>
<th>phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>fax</td>
<td>map</td>
<td>activity</td>
<td>news</td>
<td>timetable</td>
<td>number_of_data_shows</td>
<td>number_of_videos</td>
<td></td>
</tr>
<tr>
<td>number_of_slide_projectors</td>
<td>number_of_projectors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 4. T_meeting

<table>
<thead>
<tr>
<th>room_name</th>
<th>date</th>
<th>am_pm</th>
<th>meeting_code</th>
<th>meeting_name</th>
<th>beginning_time</th>
</tr>
</thead>
<tbody>
<tr>
<td>ending_time</td>
<td>data_shows_requested</td>
<td>videos_requested</td>
<td>slide_projectors_requested</td>
<td></td>
<td></td>
</tr>
<tr>
<td>projectors_requested</td>
<td>logon</td>
<td>password</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 5. T_room

<table>
<thead>
<tr>
<th>room_name</th>
<th>room_code</th>
<th>capacity</th>
<th>depot_code</th>
<th>comments</th>
</tr>
</thead>
</table>


5 BP LPG UK database Modules

BP LPG UK database is divided in four modules:

Employees
- Add/Edit/Delete employees
- Employee's profile
- Search for an employee by first name, last name, job title, depot and department.

Meetings
- Book new meetings (associating one username and one password)
- Edit/Delete meetings (with one username and one password)
- Rooms' affecting
- Meeting's details
- Search for a meeting by meeting's name, date or depot.

Depots
- Add/Edit/Delete depots
- Equipments' affecting
- Rooms' distribution
- Depot's staff
- Depot's details
- Search for depot's details by depot's name, depot's activity, city or country.

Departments
- Add/Edit/Delete departments
- Department's Staff
- Department's details

6 User's graphic connection

Tree Menus

Once opened you can choose four different ways:

- 1 Who's who?
- 2 Meetings
- 3 Depots
- 4 Departments
Scheme's main objective is help understanding how menu's links work. However, the access architecture presented doesn't explain the dynamic database.
8 Interfaces

Interfaces, principal buttons and objects used are explained in this chapter.

8.1 Objects

- Tables
- Queries
- Forms

8.2 General Buttons

- one click-back to the home page
- one click-back to the previous page
- one click-open several search forms
- one click-open several blank forms
- one click-close current form
- quit the programme
- one click-show all the records
- delete current record
- edit current record
- one click-erase all fields
8.3 Forms & Specific Buttons

8.3.1 Home page

"F_main_page"

```
BP LPG UK

Who's who?  Depots
Meetings  Departments
Quit
```

- **Who's who?**
  - one click-open form F_employee

- **Depots**
  - one click-open form F_depot

- **Departments**
  - one click-open form F_department

- **Meetings**
  - one click-open form F_meeting

In this form it isn’t associated any table and F_main_page is directly related only with the forms above. However all forms are connected through the button "Quit".
8.3.2 Who's who?

"F_employee"

Q_employee_last_name supports list box (employeelist).

Double click-open form F_employee_field on the specific employee
8.3.2.1 Search

"F_employee_search"

Q_employee_search supports this form.

one click-­allows searching

8.3.2.2 Employee’s Profile

"F_employee_fields"
This form is based in three tables:

T_employee
T_depot
T_department

This button connects F_employee_fields with F_department_fields

This button connects F_employee_fields with F_depot_fields

8.3.3 Depots

"F_depot"

Q_depot_name_code query supports list box (depotlist).

one click-open form F_room
Double click-open form F_depot_field on the specific depot page.

8.3.3.1 Search

"F_depot_search"

This form is based in T_depot table.

one click-allows searching
8.3.3.2  Depot's details

"F_depot_fields"

F_depot_fields is supported by T_depot (table).

Room's Information

This button connects F_depot_fields with F_room_fields.

Staff Information

This button connects F_depot_fields with F_employee_fields.
8.3.3.3 Meeting’s rooms

“F_room”

This form is not supported by any objects, only list box (roomlist) is based in Q_room_list (query).

Double click-open form F_room_field on the specific room page.
8.3.3.3.1 Room’s Details

“F_room_fields”

Two tables support this form:

T_room
T_dpot

Room’s Meetings
one click-open form “F_room_meeting”

Depot’s Equipment
one click-open form “F_depot_rooms”
8.3.3.3.1.1 Room's Meetings

"F_room_meeting"

Two tables support this form:

T_meeting
T_room

8.3.3.3.1.2 Depot's Equipment

"F_depot_rooms"

T_depot supports this form.
8.3.4 Departments

"F_department"

This form is not supported by any objects, only departmentlist (list box) is based in Q_department_name_code (query).

Double click-open form F_department_field on the specific department page.
8.3.4.1 Department's Details

"F_department_fields"

T_department (table) supports this form.

one click-open form F_employee_fields
8.3.5 Meetings

"F_meeting"

This form is not supported by any objects, only meetinglist is based in Q_meeting_code_name (query).

Double click-open form F_meeting_field on the specific meeting page.
8.3.5.1 Username and Password

"F_introduce_user_password_change"

Q_password_username_search (query) supports this form.

one click-allows F_meeting_fields_change

connection.

8.3.5.2 Search

"F_meeting_search"

Note: To search for a string in the middle of a name or depot, start your search text with an asterisk. For example: *mouth
Q_meeting_search (query) supports this form.

one click-allows searching.

8.3.5.3 Add New

"F_meeting_add"

Three tables support this form:

T_meeting
T_depot
T_room

one click-allows F_meeting connection.
See a Calendar
one click-open form F_calendar

Room's Information
one click-open form F_room_fields

Room's Information (All)
one click-open form F_room_summary

Depot's Information
one click-open form F_depot_fields

Equipment's Information
one click-open form F_depot_rooms

8.3.5.4 Meeting's Details

"F_meeting_fields"

[Image of the interface for meeting details and requested equipment]
Three tables support this form:

- T_meeting
- T_depot
- T_room

See a Calendar
one click-open form F_calendar

Depot's Information
one click-open form F_depot_fields

Equipment's Information
one click-open form F_depot_rooms

8.3.5.5 Calendar

"F_calendar"

Any object does not support this form.

month can be choosen

year can been choosen
9  Passwords

Some actions like change, add or delete (meetings are exception) are security kept by one internal password. That password was written on Visual Basic Code. Each action has one different password, however to simplify process all of them are equal at this moment. It can be changed at any time, you only have to open Visual Basic Code and change “883099” to “any password”.

Note: if you want to change all passwords don’t forget that you have to change Visual Basic Code in each action.

10  Installing Database

10.1 Minimum Requirements

Suitable System:

A Pentium PC running Windows 95, Windows 98 or Windows NT

Other requirements:

MsAccess Programme
200 MB of free disk space
Cd-Rom drive

10.2 How to install

check if your computer has 200 MB memory free
save LPGstud2 in your computer C drive

10.3 How to open

double click to open as a user
shift+double click to open as a site’s manager
Attachment 7

User's Manual

Project:
BP LPG UK Intranet
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1 Introduction

Manual's objective is to guarantee understanding and facility database's handling. The main target of the handbook is any employee where working on Access database as user.

2 Database meaning and functions

The word "database" means "keep information". BP LPG UK Database was built to simplify searching, adding, editing or deleting data. Database construction was not an easy work. Several steps were crossed to reach final objective. Tables, forms and queries were built and Visual Basic language was developed. Visual Basic for Access has its own visual programming environment.

3 Installing Database

3.1 Minimum Requirements

Suitable System:

A Pentium PC running Windows 95, Windows 98 or Windows NT

Other requirements:

MsAccess programme
200 MB of free disk space
Cd-Rom drive

3.2 How to install

check if your computer has 200 MB memory free
save LPGstud2 in your computer C drive

3.3 How to open

LPGstud2 double click
4 Working with BP LPG UK database...

Double clicking LPGstud2:

To switch off database you only have to click “Quit” as showed in picture above.

If you click on “who’s who?” button you are opening employees’ menu (paragraph 4.1).

If you click on “Depots” button you are opening depots’ menu (paragraph 4.2).

If you click on “Departments” button you are opening departments’ menu (paragraph 4.3).

If you click on “Meetings” button you are opening meetings’ menu (paragraph 4.4).
4.1 Who’s who?' Menu

click here to search for any employee (paragraph 4.1.1)

click here to add new employee (paragraph 4.1.2)

Double click to see employee’s details (paragraph 4.1.1.3)

click here to return page before (picture 1)
4.1.1 Search

![BP1PGUK interface with search fields]

**Note:** To search for a string in the middle of a name or department, start your search text with an asterisk. For example: *aul

picture 1.4-searching for an employee

click here to return previous page (picture 1.1)

clicking OK:

4.1.1.1 Before filling any field: message box (picture 1.5) alerting you will appear.

![Microsoft Access error message]

picture 1.5-Alerting message box
4.1.1.2 No employees meet your search: one message box (picture 1.6) will be showed to you

![Microsoft Access](picture 1.6-Informing message box)

4.1.1.3 One employee meet your search: employee's details' form (picture 1.7) will be open

![Employee's Details](picture 1.7-employee's details)

Click here to return previous page (picture 1.2)

Click here to see all BP LPG UK's employees (picture 1.7)

Click here to edit employee's details (paragraph 4.1.1.3.1)
4.1.1.3.1 Access’s Password

![Password dialog box](image)

picture 1.8-message box asking for a password

- If you are not authorized to edit, delete or add employee’s/depot’s/department’s/room’s details you have to click “Cancel”.

- If you are authorized to change employee’s/depot’s/department’s/room’s details you can introduce correct password and click OK. Now your form is ready to be changed.

4.1.1.4 More than one employee meet your search: message box will be open asking if you want a summary list, employee’s details or cancel the action (picture 1.9):

![Message box](image)

Picture 1.9-Message box

4.1.1.4.1 Yes click here to open employee’s names’ form (picture 1.10).
double clicking in any field (picture 1.11) to open employee’s details’ form (picture 1.7).

4.1.1.4.2 No? click here to open employee’s details’ form (picture 1.7)

4.1.1.4.3 Cancel? click here to return searching page (picture 1.4)

4.1.2 Add New

Please read paragraph 4.1.1.3.1 before this one.

Clicking “add new” button will open a blank employee’s form (picture 1.9)
click here after fill all required fields and Who's who menu (picture 1.1) will be open.

[Clear]

click here to erase all filled fields.

[Up]

click here to give up and to return page before (picture 1.1).

[OK]

click here to search for any depot (paragraph 4.2.2)

Locations

click here to see meeting's rooms' menu (paragraph 4.2.3)

[Depot] Double click to see depot's details (paragraph 4.2.1.3)
4.2 Depots’ Menu

![Image of the Depots menu]

picture 2.1-Depots' menu

- **Search**: click here to search for any depot (paragraph 4.2.1)
- **Add New**: click here to add new depot (paragraph 4.2.2)
- **Meeting’s Rooms**: click here to see meeting’s rooms’ menu (paragraph 4.2.3)
- **Avonmouth (HO)**: Double click to see depot’s details (paragraph 4.2.1.3)

![Image of the Message box]

picture 2.2-Message box
4.2.1 Search

picture 2.4-searching for a depot

a) before filling any field:
message box (picture 1.5) alerting you will appear on screen.

b) No depots meet your search:
one message box (picture 2.5) will be opened
c) One (at least) depot meet your search: depot’s details’ form (picture 2.6) will be open

picture 2.6-depot’s details

- click here to return previous page (picture 2.1)
- click here to see all BP LPG UK’s depots (picture 2.6)
- click here to edit depot’s details (paragraph 4.1.1.3.1)
- click here to delete depot’s details (paragraph 4.1.1.3.1)

paragraph 4.2.3.1
4.2.2 Add New

Please read paragraph 4.1.1.3.1 before this one.

Clicking "add new" button will open a blank depot’s details’ form (picture 2.7)

- click here to add new meeting room (paragraph 4.2.3.2).
- click here after filling all required fields and Depots’ menu (picture 2.1) will be open.
- click here to erase all filled fields.
- click here to give up and return page before (picture 2.1).
4.2.3 Meetings' Rooms

Clicking meetings' room button to open Meetings' rooms' menu's form (picture 2.8):

![Meetings' Rooms](image)

picture 2.8-Meetings' rooms menu

<table>
<thead>
<tr>
<th>room's name</th>
<th>depot's name</th>
</tr>
</thead>
<tbody>
<tr>
<td>avonmouth (ground floor)</td>
<td>Avonmouth (HO)</td>
</tr>
<tr>
<td>avonmouth (first floor)</td>
<td>Avonmouth (HO)</td>
</tr>
<tr>
<td>Avonmouth terminal room</td>
<td>Avonmouth Terminal</td>
</tr>
<tr>
<td>Launceston</td>
<td>Launceston</td>
</tr>
<tr>
<td>Carlisle</td>
<td>Carlisle</td>
</tr>
<tr>
<td>Evanton</td>
<td>Evanton</td>
</tr>
</tbody>
</table>

picture 2.9-meetings' rooms list

double click to see meetings' rooms' details (paragraph 4.2.3.1)

click here to add new meeting room (paragraph 4.2.3.2)

click here to return previous page (picture 2.1)
4.2.3.1 Meetings' rooms details

- **click here to return previous page (picture 2.8)**
- **Show All**
  - click here to see all BP LPG UK Meetings' rooms (picture 2.10)
- **Edit**
  - click here to edit room's details (paragraph 4.1.1.3.1)
- **Delete**
  - click here to delete room's details (paragraph 4.1.1.3.1)
- **Room's Meetings**
  - click here to see which meetings are already booked for that room (paragraph 4.2.3.1.1)
- **Depot's Equipment**
  - click here and to know which equipments each depot has (paragraph 4.2.3.1.2)
4.2.3.1.1  Room’s Meetings

Meetings already booked (picture 2.11):

![Room's Meetings](image)

picture 2.11-room's meetings

Click here to close room’s meetings’ form

4.2.3.1.2  Depot’s Equipment

Clicking depot’s equipment (picture 2.12):

![Depot's Equipment](image)

picture 2.12-depot's equipment

Click here to close depot’s equipment’s.
4.2.3.2 Add New

Please read paragraph 4.1.1.3.1 before this one.

Clicking "add new" button will open a blank meeting's room's form (picture 2.13)

OK - click here after fill all required fields and Meetings' rooms' menu (picture 2.8) will be open.

Clear - click here to erase all filled fields.

Click here to give up and to return previous page (picture 2.8).
4.3 Departments' Menu

picture 3.1-Departments Menu

picture 3.2-Message box

double click to see department's details' form (paragraph 4.3.1)

Add New

click here to add new department (paragraph 4.3.2)

click here to return previous page (picture 1)
4.3.1 Department's details

Click here to return previous page (picture 3.1)

Click here to see all BP LPG UK's departments (picture 3.4)

Click here to edit department's details (paragraph 4.1.1.3.1)

Click here to delete department's details (paragraph 4.1.1.3.1)
click here to know who’s working in each department (picture 1.7)

4.3.2 Add New

Please read paragraph 4.1.1.3.1 before this one.

clicking “add new” button will open a blank department’s form (picture 3.5)

OK click here after filling all required fields and Department’s menu (picture 3.1) will be open.

Clear click here to erase all filled fields.
click here to give up and to return previous page (picture 3.1).

4.4 Meetings’ Menu

picture 4.1-Meeting’s menu

picture 4.2-Message box

double click to see meeting’s details’ form (paragraph 4.4.1)

click here to search for any meeting (paragraph 4.4.2)

click here to add new meeting (paragraph 4.4.3)
4.4.1 Meeting's details

Double clicking on meetings' list:

click here and all meetings will be showed (picture 4.4)
click here to open one form asking for a username and a password (4.4.1.1 paragraph)
click here to give up and return previous page (picture 4.1).
4.4.1.2 Click here to see the dynamic calendar (paragraph 4.4.1.2)

Depot Information  
Click here to see depot’s meeting information (picture 2.6)

Room’s Information  
Click here to see room’s meeting information (picture 2.10)

4.4.1.1 Asking username and password

![BP LPG UK](image)

picture 4.5-asking username and password

You have to write a username and password before clicking OK. Meeting’s name is not required.

Click here to give up and return previous page (picture 4.1).

Click here to open a changing form (paragraph 4.4.1.1.1)

4.4.1.1.1 Clicking OK results

Clicking OK:

a) Message box (picture 4.6) asking for a username and a password/asking for a username/asking for a password

b) Message box (picture 4.7) alerting you that username or password are not correct

c) New form (picture 4.8) is opened showing you meeting’s details that you can edit or delete.
4.6 Message box

4.7 Message box

4.8 Meeting's details changing form
See a Calendar: click here to see the dynamic calendar (paragraph 4.4.1.2)

Depot Information: click here to see depot's meeting information (picture 2.6)

Room's Information: click here to see room's meeting information (picture 2.10)

Room's Information (All): click here to see rooms' summary information (picture 4.9)

picture 4.9-all summary rooms' information

Close: click here to close form (picture 4.9)

Equipment: click here to see depot's equipment (picture 2.12)
4.4.1.2 Dynamic Calendar

Clicking "calendar" button will show you the dynamic calendar (picture 4.10)

![Dynamic Calendar](picture 4.10-Dynamic Calendar)

<table>
<thead>
<tr>
<th>SEPTEMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>JANUARY</td>
</tr>
<tr>
<td>FEBRUARY</td>
</tr>
<tr>
<td>MARCH</td>
</tr>
<tr>
<td>APRIL</td>
</tr>
<tr>
<td>MAY</td>
</tr>
<tr>
<td>JUNE</td>
</tr>
<tr>
<td>JULY</td>
</tr>
<tr>
<td>AUGUST</td>
</tr>
<tr>
<td>SEPTEMBER</td>
</tr>
<tr>
<td>OCTOBER</td>
</tr>
<tr>
<td>NOVEMBER</td>
</tr>
<tr>
<td>DECEMBER</td>
</tr>
</tbody>
</table>

Clicking on combo box you can choose calendar’s month.

- (picture 4.11-months' list)

...click here to return previous page (picture 4.1)...

- clicking OK:
  
  a) before filling any field:
  one message box (picture 1.5) alerting you will be appear...

  b) No meeting found in your search:
  one message box (picture 4.14) will be showed to you...
Clicking on combo box you can choose calendar's year

- click cross to close calendar

**current date**

### 4.4.2 Search

**Picture 4.13**

- click here to return previous page (picture 4.1)

**clicking OK:**

- **a)** before filling any field:
  one message box (picture 1.5) alerting you will be appear.

- **b)** No meeting found in your search:
  one message box (picture 4.14) will be showed to you
c) One depot (at least) meet your criteria: meeting’s details’ form (picture 4.4) will be open

4.4.3 Add New

Clicking “Add New” button will open a blank meeting’s form (picture 4.15)

```
OK
```
click here after filling all required fields. Meetings’ menu (picture 4.1) will be open.
Clear: click here to erase all filled fields.

Stop: click here to give up and return previous page (picture 4.1).

See a Calendar: click here to see the dynamic calendar (4.4.1.2 paragraph)

Depot Information: click here to see depot’s meeting information (picture 2.6)

Room’s Information: click here to see room’s meeting information (picture 2.10)

Room’s Information (All): click here to see rooms’ summary information (picture 4.9)

Equipment’s Information: click here to see depot’s equipment (paragraph 4.2.3.1.2)
Dealing with Errors

What happens if you try to introduce non valid data?

BP LPG UK database was built thinking that all of us make mistakes. The way to reduce occurring errors probabilities is to introduce alerting message boxes. Obviously, access to next field will only take place when errors are corrected.

Some examples:

Booking a meeting:
Introducing username and password:

![Username and Password Entry](image)

![Password Request](image)
# Index

## A

<table>
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<th>Add New</th>
<th>8,9</th>
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</thead>
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<tr>
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<td>Depot</td>
<td>13</td>
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<tr>
<td>meeting room</td>
<td>17</td>
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<tr>
<td>department</td>
<td>20</td>
</tr>
<tr>
<td>meeting</td>
<td>28</td>
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## B

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<tbody>
<tr>
<td>Meeting</td>
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## C

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## D

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<td>Employee</td>
<td>6,7</td>
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<tr>
<td>Depot</td>
<td>7,12</td>
</tr>
<tr>
<td>meeting room</td>
<td>7,15</td>
</tr>
<tr>
<td>department</td>
<td>7,19</td>
</tr>
<tr>
<td>meeting</td>
<td>22,23</td>
</tr>
<tr>
<td>Department</td>
<td>18</td>
</tr>
<tr>
<td>Depot</td>
<td>10</td>
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<tr>
<td>Details</td>
<td></td>
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<tr>
<td>Employee</td>
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<tr>
<td>Depot</td>
<td>12</td>
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<tr>
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<tr>
<td>meeting</td>
<td>22</td>
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<tr>
<td>Dynamic</td>
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## E

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<thead>
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<tbody>
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<tr>
<td>Depot</td>
<td>7,12</td>
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<tr>
<td>meeting room</td>
<td>7,15</td>
</tr>
<tr>
<td>department</td>
<td>7,19</td>
</tr>
<tr>
<td>meeting</td>
<td>22,23</td>
</tr>
<tr>
<td>Employee</td>
<td>4,5,6,7,8,13</td>
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<tr>
<td>Equipment</td>
<td>16</td>
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<tr>
<td>Error</td>
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## L

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<tr>
<td>Depot</td>
<td>10</td>
</tr>
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<td>meeting room</td>
<td>14</td>
</tr>
<tr>
<td>department</td>
<td>18</td>
</tr>
<tr>
<td>meeting</td>
<td>21</td>
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## M

<table>
<thead>
<tr>
<th>Meeting</th>
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</thead>
<tbody>
<tr>
<td>Meeting Room</td>
<td>14</td>
</tr>
<tr>
<td>Menu</td>
<td></td>
</tr>
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<td>Employee</td>
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<td>department</td>
<td>18</td>
</tr>
<tr>
<td>meeting</td>
<td>21</td>
</tr>
<tr>
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<td>5,6,7,11,12,24,27,28,30</td>
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<tr>
<th>Search</th>
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</thead>
<tbody>
<tr>
<td>Employee</td>
<td>5</td>
</tr>
<tr>
<td>Depot</td>
<td>11</td>
</tr>
<tr>
<td>Meeting</td>
<td>27</td>
</tr>
<tr>
<td>Staff</td>
<td>4,5,6,7,8,13</td>
</tr>
<tr>
<td>Summary</td>
<td>7,8</td>
</tr>
</tbody>
</table>

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## U

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---

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User's Manual