**Beltel Hotel Spa**

# **Analysis**

## **Introduction**

Betel is a large hotel, on the outskirts of Belfast, it has a spa and beauty complex. The spa has over 40 staff who work in different roles. In addition to providing spa treatments, the spa also sells products to its clients, with the clients receiving their orders by delivery. They sell a range of cosmetic products including scented oils, candles, and bath salts. The database that has been designed is to support the spa with client orders and stock management.

## **Overview**

Currently, the spa uses a paper-based system to store all their client records and orders. All information is filed alphabetically in filing cabinets in an office within the spa. There is no backup of the information and due to the amount of paper this takes up a lot of storage space, in the event of a flood or fire the business would lose all their information. When the clients order products, an employee fills out an order form. The order form is given to the delivery department who prepare the package and send it out to the client’s address. A copy of the order form is passed to the accounts department who invoice the client. The stock management department then look at how much of each product is sold and then manually adjust stock records of what is sold. If the stock remaining for a product is below a certain amount, they restock that product from one of the suppliers that the spa works with.

## **Problems with Current System**

The paper-based system that Beltel currently uses causes delays in products being dispatched in an efficient manner to clients. Data is not recorded accurately by staff, the paper trail is not done in an efficient and timely manner, which leads to duplication, or missed orders. There can also be the chance that an order is completed twice as they orders are not numbered meaning, that if more than one member of staff processes the order at the same time the order can be doubled. With the current system, Beltel must keep getting the personal information off their clients as it is not kept centrally on a database. The information can be taken down inaccurately by staff which can cause problems, including overcharging the clients, sending the delivery to the wrong address and giving the client the wrong products. With the paper-based system there is time wasted as they must repeat the collection of data each time a client makes an order, like their address or phone number. Paper can be easily misplaced, misfiled or damaged. Stock is not recorded accurately which can lead to order dispatch delays and delays in reordering stock.

## **Structure Diagram of Beltel**

Owner

Stock Management Manager

Delivery Manager

Customer Service Manager

Accounts Manager

Sales Manager

Accounts Staff

Delivery Staff

Stock Management Staff

Customer Service Staff

Sales Staff

|  |  |  |
| --- | --- | --- |
| **Accounts Manager** | Bryar Peterson | * Provides the owner with detailed accounts reports monthly. * Manages the financial information of the company. * Manages the Accounts staff. |
| **Delivery Manager** | Lois Alexander | * Organise deliveries for the company’s drivers. * Oversees the loading of the delivery vans. * Produces delivery reports. * Provides drivers with delivery information. |
| **Stock Management Manager** | Penelope Bright | * Reorder stock when product levels are low. * Ensures stock checks are carried out on a regular basis to ensure sufficient stock. * Produces reports for management on best-selling products. * Manage relationships with suppliers and check prices with suppliers. |
| **Customer Service Manager** | Keely Castaneda | * Manage customer service staff. * Liaise with customers to manage any customer complaints. |
| **Sales Manager** | Cruz Swanson | * Provides the owner with monthly and quarterly sales reports. * Manages sales staff to ensure they are performing well and meeting sales targets. |

|  |  |  |
| --- | --- | --- |
| **Accounts Staff** | Melanie Ayers  Clarke Manning  Belle Cole  Denton Lynn  Rajah Mueller  Hedwig Barlow  Drew Garza  Ayanna Dorsey  Theodore Gaines | * Produce invoices. * Process client payments * Send out payment reminders. * Pay supplier invoices * Produce financial projections. * Maintain financial records of the company. |
| **Delivery Staff** | Keegan Abbott  Faith Wilson  Alden Gill  Randall Barrett  Serina Patton  Rinah Rollins  Quinn Spears  Valentine Boyer  Oliver Hunt  Rowan Cervantes | * Delivers ordered products to clients. |
| **Stock Management Staff** | Brock Alvarado  Anastasia Barrera  Eagan Cash  Rajah Meadows  Gage Sweet  Emily William  Donna Houston  Joelle Beard | * Performs stock checks. * Updates stock details following orders/cancellations/stock delivery. * Updates prices of stock. * Add/edits stock details. |
| **Customer Service Staff** | Julie Mills  Kellie Lara  Neil Sloan  Karly Goodwin  Sierra Simon  Ira Dennis  Rhoda Carson | * Liaise with clients and deals with client queries and complaints. * Keeps clients up to date with new products and stock availability. * Add/edits client details. |
| **Sales Staff** | Jorden Guy  Juliet Rasmussen  Carson Hanson  Chloe Shaw  Indira Pearson  Adele Warren  Jaime Gutierrez  Evan Knowles  Cedric Bowman | * Enters order details from clients into the system. * Produces invoices and receipts for orders. * Performs order cancellations. |

## **User requirements**

* The new system should be able to enter new/edit/remove client details on the system.
* The new system should be able to enter new/edit/remove departments on the system.
* The new system should be able to enter new/edit/remove order details on the system.
* The new system should be able to enter new/edit/remove product details on the system.
* The new system should be able to enter new/edit/remove staff details on the system.
* The new system should be able to enter new/edit/remove supplier details on the system.
* The new system should be able to enter new/edit/remove client types on the system.
* The new system should allow the user to search for clients using their client ID.
* The new system should allow the user to search for clients using their surname.
* The new system should allow the user to search for products using their product ID.
* The new system should allow the user to search for staff using their staff ID.
* The new system should allow the user to search for staff using their surname.
* The new system should allow the user to search for orders using their order ID.
* The new system should allow the user to search for staff by their department.
* The new system should allow the user to increase and decrease the cost price of products.
* The new system should allow the user to cancel orders.
* The new system should allow the user to mark orders as paid
* The new system should allow the user to mark orders as delivered.
* The new system should allow the user to increase and decrease the stock amount.
* The new system should allow the user to change the delivery date of an order.
* The new system should allow the user to see the orders that need to be delivered within a time frame.
* The new system should allow the user to see products that need to be restocked.
* The new system should allow the user to see the stock levels of all products.
* The new system should allow the user to see the sales within a time frame.
* The new system should allow the user to print details from the database.
* The new system should be backed up regularly.
* The security of the new system should have a username and password.
* The new system should have all data stored in an organgised format.
* The new system should reduce human error and inconsistencies.
* The new system should be more effective than the previous system.
* The new system should be easy for users to use and understand.
* The new system should look pleasant to users.
* The new system should be able to create and run queries to gather specified information with relevant information required by the user.
* The new system should be able to create reports with data from the system and sorted and grouped if necessary.
  1. Analysis of Orders in Quarter 1 of the Financial Year
  2. Analysis of Orders in Quarter 2 of the Financial Year
  3. Analysis of Orders in Quarter 3 of the Financial Year
  4. Analysis of Orders in Quarter 4 of the Financial Year
  5. Client by Client ID
  6. Client by Surname
  7. Comparingthe Price of Products from Suppliers
  8. Current Stock Levels
  9. Deliveries for the next 4 weeks
  10. Deliveries for the next week
  11. Find Order by Order ID
  12. Order by Client ID
  13. Order by staff within specified period
  14. Orders in specified period
  15. Overdue Payments
  16. Product by Product ID
  17. Product from Suppliers
  18. Products sold in a certain month
  19. Sales in Quarter 1 of the Financial Year
  20. Sales in Quarter 2 of the Financial Year
  21. Sales in Quarter 3 of the Financial Year
  22. Sales in Quarter 4 of the Financial Year
  23. Staff by department
  24. Staff by Surname
  25. Stock under Re-order level
  26. Supplier by Supplier ID
  27. Supplier by Supplier Name
  28. Todays Deliveries

### Essential

* The new system should be able to enter new/edit/remove client details on the system.
* The new system should be able to enter new/edit/remove departments on the system.
* The new system should be able to enter new/edit/remove order details on the system.
* The new system should be able to enter new/edit/remove product details on the system.
* The new system should be able to enter new/edit/remove staff details on the system.
* The new system should be able to enter new/edit/remove supplier details on the system.
* The new system should be able to enter new/edit/remove client types on the system.
* The new system should allow the user to search for clients using their client ID.
* The new system should allow the user to search for clients using their surname.
* The new system should allow the user to search for products using their product ID.
* The new system should allow the user to search for staff using their staff ID.
* The new system should allow the user to search for staff using their surname.
* The new system should allow the user to search for orders using their order ID.
* The new system should allow the user to search for staff by their department.
* The new system should allow the user to increase and decrease the cost price of products.
* The new system should allow the user to cancel orders.
* The new system should allow the user to mark orders as paid
* The new system should allow the user to mark orders as delivered.
* The new system should allow the user to increase and decrease the stock amount.
* The new system should allow the user to change the delivery date of an order.
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* The security of the new system should have a username and password.
* The new system should have all data stored in an organgised format.
* The new system should be more effective than the previous system.
* The new system should be able to create and run queries to gather specified information with relevant information required by the user.
* The new system should be able to create reports with data from the system and sorted and grouped if necessary.
  1. Analysis of Orders in Quarter 1 of the Financial Year
  2. Analysis of Orders in Quarter 2 of the Financial Year
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  4. Analysis of Orders in Quarter 4 of the Financial Year
  5. Client by Client ID
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  7. Comparingthe Price of Products from Suppliers
  8. Current Stock Levels
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  18. Products sold in a certain month
  19. Sales in Quarter 1 of the Financial Year
  20. Sales in Quarter 2 of the Financial Year
  21. Sales in Quarter 3 of the Financial Year
  22. Sales in Quarter 4 of the Financial Year
  23. Staff by department
  24. Staff by Surname
  25. Stock under Re-order level
  26. Supplier by Supplier ID
  27. Supplier by Supplier Name
  28. Todays Deliveries

### Non-essential

* The new system should reduce human error and inconsistencies.
* The new system should be easy for users to use and understand.
* The new system should look pleasant to users.

## **Inputs, Processes and Outputs**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Input | Processes | Output |
| Client | Client ID  First Name  Surname  DoB  Address 1  Address 2  Postcode  Phone No  Email  TypeID | Processing:   * Add new Client * Edit Client * Remove Client   Queries:   * Client by Client ID * Client by Surname * Deliveries for the next 4 weeks * Deliveries for the next week * Find Order by Order ID * Invoice * Order by Client ID * Order in inspecified period * Overdue Payments * Today’s Deliveires | Reports:   * Client by Client ID * Client by Surname * Deliveries for the next 4 weeks * Deliveries for the next week * Find Order by Order ID * Invoice * Order by Client ID * Order in inspecified period * Overdue Payments * Today’s Deliveires |
| Client Type | Type ID  Type Name  Discount | Processing:   * Add new Client Type * Edit Client Type * Remove Client Type   Queries:   * Invoice | Reports:   * Invoice |
| Department | Department ID  Department Name | Processing:   * Add new Department * Edit Department * Remove Department   Queries:   * Staff by department | Reports:   * Staff by department |
| Order | Order ID  Client ID  Staff ID  Date of Order  Delivery Date  Delivered  Canceled  Paid  Payment Type  Payment Due Date | Processing:   * Add new Order * Edit Order * Remove Order   Queries:   * Analysis of Orders in Quarter 1 of the Finacial Year * Analysis of Orders in Quarter 2 of the Finacial Year * Analysis of Orders in Quarter 3 of the Finacial Year * Analysis of Orders in Quarter 4 of the Finacial Year * Deliveries for the next 4 weeks * Deliveries for the next week * Find Order by Order ID * Invoice * Order by Client ID * Orders by Staff in speciefed period * Orders in specifed period * Overdue Payments * Products sold in a certain month * Sales in Quarter 1 of the Financial Year * Sales in Quarter 2 of the Financial Year * Sales in Quarter 3 of the Financial Year * Sales in Quarter 4 of the Financial Year * Today’s Deliveries * Cancel Order * Change Delivery Date * Order Delivered * Order Paid | Reports:   * Analysis of Orders in Quarter 1 of the Finacial Year * Analysis of Orders in Quarter 2 of the Finacial Year * Analysis of Orders in Quarter 3 of the Finacial Year * Analysis of Orders in Quarter 4 of the Finacial Year * Deliveries for the next 4 weeks * Deliveries for the next week * Find Order by Order ID * Invoice * Order by Client ID * Orders by Staff in speciefed period * Orders in specifed period * Overdue Payments * Products sold in a certain month * Sales in Quarter 1 of the Financial Year * Sales in Quarter 2 of the Financial Year * Sales in Quarter 3 of the Financial Year * Sales in Quarter 4 of the Financial Year * Today’s Deliveries |
| Order-Product | Order ID  Product ID  Quantity | Queries:   * Invoice * Products sold in a certain month * Sales in Quarter 1 of the Financial Year * Sales in Quarter 2 of the Financial Year * Sales in Quarter 3 of the Financial Year * Sales in Quarter 4 of the Financial Year * Change Product Price | Reports:   * Invoice * Products sold in a certain month * Sales in Quarter 1 of the Financial Year * Sales in Quarter 2 of the Financial Year * Sales in Quarter 3 of the Financial Year * Sales in Quarter 4 of the Financial Year |
| Product | Product ID  Product Name  Stock Amount  Re-Order Level  Selling Price | Processing:   * Add new Product * Edit Product * Remove Product   Queries:   * Compareing the Price of Products from Suppliers * Current Stock Levels * Invoice * Product by Product ID * Products sold in a certain month * Sales in Quarter 1 of the Financial Year * Sales in Quarter 2 of the Financial Year * Sales in Quarter 3 of the Financial Year * Sales in Quarter 4 of the Financial Year * Stock under Re-order Level * Change Stock Amount | Reports:   * Compareing the Price of Products from Suppliers * Current Stock Levels * Invoice * Product by Product ID * Products sold in a certain month * Sales in Quarter 1 of the Financial Year * Sales in Quarter 2 of the Financial Year * Sales in Quarter 3 of the Financial Year * Sales in Quarter 4 of the Financial Year * Stock under Re-order Level |
| Supplier-Product | Supplier ID  Product ID  Cost | Queries:   * Comparing the Price of Products from Suppliers * Product from Suppliers * Change the cost price of a product from a Supplier | Reports:   * Comparing the Price of Products from Suppliers * Product from Suppliers |
| Supplier | Supplier ID  Supplier Name  Address 1  Address 2  Postcode  Phone No  Email | Processing:   * Add new Supplier * Edit Supplier * Remove Supplier   Queries:   * Comparing the Price of Products from Suppliers * Product from Suppliers * Supplier by Supplier ID * Supplier by Suppler Name | Reports:   * Comparing the Price of Products from Suppliers * Product from Suppliers * Supplier by Supplier ID * Supplier by Suppler Name |
| Staff | Staff ID  Deparment ID  First Name  Surname  Address 1  Address 2  Postcode  Phone No  Email | Processing:   * Add new Staff * Edit Staff * Remove Staff   Queries:   * Deliveries for the next 4 weeks * Deliveries for the next week * Orders by Staff in specified period * Staff by Department * Staff by Surname * Today’s Deliveries | Reports:   * Deliveries for the next 4 weeks * Deliveries for the next week * Orders by Staff in specified period * Staff by Department * Staff by Surname * Today’s Deliveries |

## **Gantt Chart**

## **Data Flow Diagrams**

Context

Beltel Spa

Order Details

Client Details

Invoice Details

Products

Re-stock Order

Product Details

Product Details

Level 1- Placing an Order

Update Stock

Client Details

Client File

Add, edit, or verify client details

1

Add Order

2

Order Details

Order File

Check Stock

3

In Stock

Not in Stock

Stock File

Products in Order

Process Order

4

Calculate Total Price

5

Stock File

Client File

Product Price

Client Discount

Send Invoice to Client

6

## **Constraints**

### Internal

1. Budget – The budget should be set in advance and reviewed on a regular basis to ensure that the project is delivered within budget. Failing to keep to the budget may lead to an incomplete system if it is not used effectively. This will lead to the system not having all the necessary features and could also have incomplete parts which can cause problems in the database.
2. Time – The development of the project should have a realistic time frame that is reviewed on a regular basis to ensure that it is complete on time. Over running the time may incur futher costs for the company. If the timeframe is not realistic the system may have errors which means the system may not run properly for its intended prupose.
3. Running Costs – The system may need technical support to maintain and keep it up to date, this will be an additional cost to the company. However a better system may lead to higher sales due to functions being streamlined.

### External

1. Laws – Customer details input into the system must comply with the data protection act. If the company fails to comply with the act they are liable for fines and prosecution which will stop the development of the system.
2. Location – The system will require storage to contain the servers required to contain the information and backup systems. However as the company transitions from a paper-based system to a digital system less physical copies will be required to be stored.
3. Exchange rates – The system will need to be able adapt the prices based on currency exchange rates.

## **Hardware and Software of the New System**

|  |  |  |
| --- | --- | --- |
| Hardware | Specification | Use |
| Storage | 2 TB | This is used to contain the database centraly |
| Ram | 4 – 8 GB | To improve the speed |
| Processor | Intel Core i9-10980XE | The processor is used to process data and information within the system |
| Grapich Card | Sapphire Radeon RX 5500 XT Pulse | This allows information to be displayed on a screen. |
| Monitor | LG UltraWide 25UM58 25-inch | This is used to display output to the monitor. |
| Keyboard | Logitech CRAFT | This allows the user to input characters into the computer |
| Mouse | Dell Optical Mouse- MS116 | Used to select and input data. |
| Printer | Brother DCP-L3550CDW Colour LED | Used to print documents. |

|  |  |  |
| --- | --- | --- |
| Software | Specification | Use |
| Microsoft Access | Microsoff Access 2013 or later | Creating and running the new system |
| Operating System | Windows 7 or later | Running the interface of the system |

# **ER diagrams**

ER diagrams are entity relationship diagrams which provide a visualisation of the relationships between the entities within a database. The main parts of an ER diagrams are the entities and the links between them, which are used to represent the relationships. There are different types of relationships between entities within a database, including:

* One to One (1-1)
* One to Many (1-M)
* Many to Many (M-M)

Although a many to many relationship is not possible to set up so there is a link table to connect them. Like Order Product is used to connect Order and Product.

Client Type



M

M

M

M

M

1

1

Product

M

1

Department

Staff

1

1

M

M

1

Supplier

1

Product Supplier

The ED diagram above shows that:

Order Product

Order

Client

* One Client can create Many Orders
* Many Clients can have the same Client Type
* One Order can contain Many Products
* One Product can be contained in Many Orders
* One Product can be ordered from Many Suppliers
* One Suppliers can deliver Many Products
* One Staff member can complete Many Orders
* One Department can contain Many Staff members

# **Normalisation**

Normalisation will be used in the new database, as the digital system will allow for the use of a relational database instead of a flat file database. Normalisation comes in three stages, which are the first, second and third form. At each stage the structure of the database will improve. Normalisation is the process of organising and breaking down the entities of the database until they are as small as possible. This minimises the data redundancy within the relational database, it also helps to reduce data inconsistency. This will result in a more effective database.

There are four stages of normalisation;

* Un-normalised data (0NF) – For the data to be in 0NF the following steps be done must;
  + Select a name for the main entity
  + Each field contained within the entity is listed in brackets
  + Primary keys are underlined
  + Foreign keys are listed with an asterisk
  + The repeating group is contained within {}
  + Derived attributes should not be included
* First Normal Form (1NF) – All the repeating data has been removed
* Second Normal Form (2NF) – the data must already be in 1NF and the partial key dependencies are removed
* Third Normal Form – the data is already in 2NF and the non-key dependencies are removed

0NF

Order (**Order ID**, Client ID, Staff ID, Date of Order, Delivery Date, Delivered, Cancelled, Paid, Payment Type, Payment Due Date, CLFirstName, CLSurname, CLDoB, CLAddress 1, CLAddress 2, CLPostcode, CLPhone No, CLEmail, Type ID, Type Name, Discount, STFirst Name, STSurename, STAddress 1, STAddress 2, STPostcode, STPhone No, STEmail, Department ID, Department ID, Department Name, {Product ID, Quantity, Product Name, Stock Amount, Re-Order Level, Cost, Supplier ID, Selling Price, Supplier Name, SPAddress 1, SPAddress 2, SPPostcode, SPPhone No, SPEmail})

1NF

Order (**Order ID**, Client ID, Staff ID, Date of Order, Delivery Date, Delivered, Cancelled, Paid, Payment Type, Payment Due Date, CLFirstName, CLSurname, CLDoB, CLAddress 1, CLAddress 2, CLPostcode, CLPhone No, CLEmail, Type ID, Type Name, Discount, STFirst Name, STSurename, STAddress 1, STAddress 2, STPostcode, STPhone No, STEmail, Department ID, Department ID, Department Name)

Client Product (**Client ID**, **Product ID**, Quantity, Product Name, Stock Amount, Re-Order Level, Cost, Supplier ID, Selling Price, Supplier Name, SPAddress 1, SPAddress 2, SPPostcode, SPPhone No, SPEmail)

2NF

Order (**Order ID**, Client ID, Staff ID, Date of Order, Delivery Date, Delivered, Cancelled, Paid, Payment Type, Payment Due Date, CLFirstName, CLSurname, CLDoB, CLAddress 1, CLAddress 2, CLPostcode, CLPhone No, CLEmail, Type ID, Type Name, Discount, STFirst Name, STSurename, STAddress 1, STAddress 2, STPostcode, STPhone No, STEmail, Department ID, Department ID, Department Name)

Client Product (**Client ID**, **Product ID**, Quantity)

Product (**Product ID**, Product Name, Stock Amount, Re-Order Level, Cost, Supplier ID, Selling Price, Supplier Name, SPAddress 1, SPAddress 2, SPPostcode, SPPhone No, SPEmail)

3NF

Order (**Order ID**, **Client ID\***, **Staff ID\***, Date of Order, Delivery Date, Delivered, Cancelled, Paid, Payment Type, Payment Due Date)

Client (**Client ID**, CLFirstName, CLSurname, CLDoB, CLAddress 1, CLAddress 2, CLPostcode, CLPhone No, CLEmail, **Type ID\***)

Client Type (**Type ID**, Type Name, Discount)

Staff (**Staff ID**, STFirst Name, STSurename, STAddress 1, STAddress 2, STPostcode, STPhone No, STEmail, **Department ID\***)

Department (**Department ID**, Department Name)

Client Product (**Client ID**, **Product ID**, Quantity)

Product (**Product ID**, Product Name, Stock Amount, Re-Order Level, Cost)

Supplier Product (**Product ID**, **Supplier ID**, Selling Price)

Supplier (**Supplier ID**, Supplier Name, SPAddress 1, SPAddress 2, SPPostcode, SPPhone No, SPEmail)

# **Validation and Verification**

Validation is an automatically preformed check done by the system, to ensure that the data entered into the is database makes sense. Although, validation cannot check the accuracy of the data, but instead restricts the amount of possible errors that can be entered into the database. There are seven forms of validation which include:

* Format check - this makes sure that the data being entered is in a certain format, like a Postcode.
* Length check - this ensures that the data is limited to a set amount of characters, like the file size.
* Range check - this is used to ensure that a numerical figure is between two values, like the number of months.
* Spell check – this is used to ensure that the words used are real by checking them with the dictionary
* Lookup Table – It makes a list of usable data which the user can select from.
* Check Digit – It uses the last one or two digits to check if the rest are correct.
* Presence Check – This is used to check if the data is null or if there are other characters in the respective field.

Verification is used to see if the data entered is the same as the source of the data. There are two main types of verification, which are:

* Proof reading – which is reading over the data to make sure it is correct
* Double entry – which is when the data is entered twice, which reduces the chance of inaccuracy.

The validation used in this new system include; format checks, to see if the ID is entered in the correct format in the database, length checks, which are used to limit the number of characters enters into each cell to reduce the size taken up in the database, range check, to calculate the age of the clients of the hotel to ensure that they are old enough to be members, Lookup tables, which are used to help select the data where there are only a small number of possible inputs, presence checks, which ensure that the primary key for each entity is entered.

# **Data Dictionaries**

Client

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Field Name | Field Size | Data Type | Validation Rule | Validation Text | Input Mask | Required | Example |
| Client ID | 5 | Short Text | Like ‘ CL[0-9][0-9][0-9]’ | “Please Enter the Client ID” | N/A | Yes | CL001 |
| First Name | 15 | Short Text | N/A | N/A | N/A | No | Griffin |
| Surname | 15 | Short Text | N/A | N/A | N/A | No | Levy |
| DoB | N/A | Date/Time |  | Client must be older than 18 | 00/00/0000 | No | 04/05/1968 |
| Address 1 | 30 | Short Text | N/A | N/A | N/A | No | Ap #689-7909 Et St. |
| Address 2 | 30 | Short Text | N/A | N/A | N/A | No | North Las Vegas |
| Postcode | 8 | Short Text | N/A | N/A | N/A | No | GQ2 3NR |
| Phone No | 15 | Short Text | N/A | N/A | N/A | No | 0800 1111 |
| Email | 255 | Short Text | N/A | N/A | N/A | No | [at.egestas@eu.ca](mailto:at.egestas@eu.ca) |
| Type ID | 5 | Short Text | Like ‘ CT[0-9][0-9][0-9]’ | “Please Enter the Client Type ID” | N/A | Yes | CT003 |

Client Type

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Field Name | Field Size | Data Type | Validation Rule | Validation Text | Input Mask | Required | Example |
| TypeID | 5 | Short Text | Like ‘ CT[0-9][0-9][0-9]’ | “Please Enter the Client Type ID” | N/A | Yes | CT002 |
| Type Name | 7 | Short Text | N/A | N/A | N/A | No | Elderly |
| Discount | Single | Number | N/A | N/A | N/A | No | 0.25 |

Department

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Field Name | Field Size | Data Type | Validation Rule | Validation Text | Input Mask | Required | Example |
| DepartmentID | 5 | Short Text | Like ‘ DP[0-9][0-9][0-9]’ | “Please Enter the Department ID” | N/A | Yes | DP001 |
| Department Name | 20 | Short Text | N/A | N/A | N/A | No | Accounts |

Order

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Field Name | Field Size | Data Type | Validation Rule | Validation Text | Input Mask | Required | Example |
| Order ID | 5 | Short Text | Like ‘ OD[0-9][0-9][0-9]’ | “Please Enter the Order ID” | N/A | Yes | OD001 |
| Client ID | 5 | Short Text | Like ‘ CL[0-9][0-9][0-9]’ | “Please Enter the Client ID” | N/A | No | CL001 |
| Staff ID | 5 | Short Text | Like ‘ ST[0-9][0-9][0-9]’ | “Please Enter the Staff ID” | N/A | No | ST001 |
| Date of Order | N/A | Date/Time | N/A | N/A | 00/00/0000 | No | 21/03/2020 |
| Delivery Date | N/A | Date/Time | N/A | N/A | 00/00/0000 | No | 02/04/2020 |
| Delivered | N/A | Yes/No | N/A | N/A | N/A | No | Yes |
| Cancelled | N/A | Yes/No | N/A | N/A | N/A | No | No |
| Paid | N/A | Yes/No | N/A | N/A | N/A | No | Yes |
| Payment Type | 15 | Short Text | N/A | N/A | N/A | No | Debit card |
| Payment Due | N/A | Date/Time | N/A | N/A | 00/00/0000 | No | 09/04/2020 |

Order Product

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Field Name | Field Size | | Data Type | | Validation Rule | | Validation Text | Input Mask | Required | Example |
| Order ID | 5 | Short Text | | Like ‘ OD[0-9][0-9][0-9]’ | | “Please Enter the Order ID” | | N/A | Yes | OD001 |
| Product ID | 5 | Short Text | | Like ‘ PD[0-9][0-9][0-9]’ | | “Please Enter the Product ID” | | N/A | Yes | PD001 |
| Quantity | Long Integer | Number | | N/A | | N/A | | N/A | N/A | 3 |

Product

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Field Name | Field Size | Data Type | Validation Rule | Validation Text | Input Mask | Required | Example |
| Product ID | 5 | Short Text | Like 'PD[0-9][0-9][0-9]' | “Please Enter the Product ID” | N/A | Yes | PD001 |
| Product Name | 50 | Short Text | N/A | N/A | N/A | No | Epson Salt 5kg |
| Stock Amount | Long Integer | Number | N/A | N/A | N/A | No | 70 |
| Re-Order Level | Long Integer | Number | N/A | N/A | N/A | No | 25 |
| Selling Price | N/A | Currency | N/A | N/A | N/A | No | £20.00 |

Staff

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Field Name | Field Size | Data Type | Validation Rule | Validation Text | Input Mask | Required | Example |
| Staff ID | 5 | Short Text | Like 'ST[0-9][0-9][0-9]' | “Please Enter the Staff ID” | N/A | Yes | ST001 |
| Department ID | 5 | Short Text | Like 'DP[0-9][0-9][0-9]' | “Please Enter the Department ID” | N/A | Yes | DP001 |
| First Name | 50 | Short Text | N/A | N/A | N/A | No | Belle |
| Surname | 50 | Short Text | N/A | N/A | N/A | No | Cole |
| Address 1 | 255 | Short Text | N/A | N/A | N/A | No | Ap #258-4345 Et St. |
| Address 2 | 255 | Short Text | N/A | N/A | N/A | No | Tilburg |
| Postcode | 15 | Short Text | N/A | N/A | N/A | No | IR8X 4HJ |
| Phone No | 15 | Short Text | N/A | N/A | N/A | No | (01877) 52953 |
| Email | 255 | Short Text | N/A | N/A | N/A | No | diam@nonjusto.co.uk |

Supplier

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Field Name | Field Size | Data Type | Validation Rule | Validation Text | Input Mask | Required | Example |
| Supplier ID | 5 | Short Text | "SP"000 | “Please Enter the Supplier ID” | N/A | Yes | SP001 |
| Supplier Name | 40 | Short Text | N/A | N/A | N/A | No | Morbi LLC |
| Address 1 | 40 | Short Text | N/A | N/A | N/A | No | 390-1108 Maecenas Rd. |
| Address 2 | 30 | Short Text | N/A | N/A | N/A | No | Srinagar |
| Postcode | 15 | Short Text | N/A | N/A | N/A | No | F7Z 7TE |
| Phone No | 20 | Short Text | N/A | N/A | N/A | No | 07624 600574 |
| Email | 255 | Short Text | N/A | N/A | N/A | No | ipsum@Nuncpulvinararcu.co.uk |

Supplier Product

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Field Name | Field Size | Data Type | Validation Rule | Validation Text | Input Mask | Required | Example |
| Supplier ID | 5 | Short Text | "SP"000 | “Please Enter the Supplier ID” | N/A | Yes | SP001 |
| Product ID | 5 | Short Text | Like 'PD[0-9][0-9][0-9]' | “Please Enter the Product ID” | N/A | Yes | PD001 |
| Cost | N/A | Currency | N/A | N/A | N/A | No | £20.00 |

# **Queries**

Queries are used to request selected data from tables within the database which match the criteria that have been set. The role of a query is to combine the relevant information to be displayed in a way that is easier for the user to understand. The data is displayed as a table with the user being able to change the list into ascending and descending order with each attribute of the information. This data can then be used to create forms and reports to present the data more clearly.

## **Basic Queries**

### Client by Surname

This query allows the user to find the information of a client by their surname. This will help management find clients details quicker than having to search through files.

Table used: Client

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Field | Surname | First Name | Address 1 | Address 2 | Postcode | Phone No | Email | Type ID |
| Table | Client | Client | Client | Client | Client | Client | Client | Client |
| Sort |  |  |  |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Criteria | [Please Enter the Clients Surname] |  |  |  |  |  |  |  |

### Find Staff by Department

This query is used to create a list of all members of staff within a department. This can be used by management to allocate work to staff members within a department.

Tables used: Staff, Department

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Field | Department ID | Department Name | Staff ID | First Name | Surname | Phone No | Email |
| Table | Staff | Department | Staff | Staff | Staff | Staff | Staff |
| Sort |  |  |  |  |  |  |  |
| Show | No | Yes | Yes | Yes | Yes | Yes | Yes |
| Criteria | [Please Enter the Department ID] |  |  |  |  |  |  |

### Find Order by Order ID

This allows the user to find the information of an order with its order ID. This will help management to deal with customer queries about an order quicker.

Tables used: Order, Client

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Field | Order ID | Client ID | Surname | First Name | Address 1 | Address 2 | Postcode | Phone No |
| Table | Order | Client | Client | Client | Client | Client | Client | Client |
| Sort |  |  |  |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Criteria | [Please Enter the Order ID] |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Field | Email | Date of Order | Delivery Date | Delivered | Cancelled | Paid | Payment Due Date |
| Table | Client | Order | Order | Order | Order | Order | Order |
| Sort |  |  |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Criteria |  |  |  |  |  |  |  |

### Order by Client ID

This can be used to find all orders for a client from their client ID. This will be useful when a client contacts the company with a query about an order.

Table used: Client, Order

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Field | Client ID | First Name | Surname | Order ID | Date of Order | Delivery Date | Delivered | Paid |
| Table | Client | Client | Client | Order | Order | Order | Order | Order |
| Sort |  |  |  |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Criteria | [Please Enter Client ID] |  |  |  |  |  |  |  |

### Client by Client ID

This can be used to find the details of a Client using their Client ID. This can be used to find the details of a Client quickly to assist with queries from a client.

Table used: Client

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Field | Client ID | First Name | Surname | Address 1 | Address 2 | Postcode | Phone No | Email |
| Table | Client | Client | Client | Client | Client | Client | Client | Client |
| Sort |  |  |  |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Criteria | [Please Enter the Clients ID] |  |  |  |  |  |  |  |

### Staff by Surname

This can be used to find the details of a member of staff with their surname. This can be used to find contact information for the staff member.

Table used: Staff

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Field | Surname | First Name | Staff ID | Department ID | Postcode | Phone No | Email |
| Table | Staff | Staff | Staff | Staff | Staff | Staff | Staff |
| Sort |  |  |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Criteria | [Please Enter the Staff members Surname] |  |  |  |  |  |  |

### Supplier by Supplier ID

This query can be used to find the details of a supplier by using their supplier ID. This can be useful to find a supplier contact details when re-ordering stock.

Table used: Supplier

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Field | Supplier ID | Supplier Name | Address 1 | Address 2 | Postcode | Phone No | Email |
| Table | Supplier | Supplier | Supplier | Supplier | Supplier | Supplier | Supplier |
| Sort |  |  |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Criteria | [Please Enter the Suppliers ID] |  |  |  |  |  |  |

### Supplier by Supplier Name

This query can be used to find the details of a supplier by using the name of the company. This can be useful to find a supplier contact details when re-ordering stock.

Table used: Supplier

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Field | Supplier Name | Supplier ID | Address 1 | Address 2 | Postcode | Phone No | Email |
| Table | Supplier | Supplier | Supplier | Supplier | Supplier | Supplier | Supplier |
| Sort |  |  |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Criteria | [Please Enter the Suppliers Name] |  |  |  |  |  |  |

### Product by Product ID

Table used: Product

This can be used to find the details about a product using its product ID.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Field | Product ID | Product Name | Stock Amount | Re-Order Level | Selling Price |
| Table | Product | Product | Product | Product | Product |
| Sort |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | Yes |
| Criteria | [Please Enter the Products ID] |  |  |  |  |

### Product from Suppliers

This query can be used to find the details of the products sold by a supplier.

Tables used: Supplier, Product, Supplier-Product

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field | Supplier ID | Product ID | Product Name | Cost |
| Table | Supplier | Product | Product | Supplier-Product |
| Sort |  |  |  |  |
| Show | Yes | Yes | Yes | Yes |
| Criteria | [Please Enter the Suppliers ID] |  |  |  |

## **Further Queries**

### Products sold in a certain month

It shows how many of each product have been sold in a certain month of the year. This will help the company to keep track of popular products.

Tables used: Product, Order-Product, Order

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field | Product Name | Quantity | Product ID | Month([Date of Order]) |
| Table | Product | Order-Product | Order-Product |  |
| Total | Group By | Sum | Group By | Group By |
| Sort |  |  |  |  |
| Show | Yes | Yes | Yes | No |
| Criteria |  |  |  | [Please enter the Month (1-12)] |

### Orders in specified period

This shows all orders entered between two points in time. This could be used as a tool by management to track monthly sales.

Tables used: Order, Client

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Field | Order ID | Date of Order | Delivery Date | Cancelled | Payment Due Date | Client ID | First Name | Surname |
| Table | Order | Order | Order | Order | Order | Client | Client | Client |
| Sort |  |  |  |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Criteria |  | >=[Start Date] And <=[End Date] |  |  |  |  |  |  |

### Stock under Re-order Level

This query is used to see what products are under the re-stock level and should be re-ordered. This will help management to have a more effective stock control system.

Tables used: Product

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field | Product ID | Product Name | Stock Amount | Re-Order Level |
| Table | Product | Product | Product | Product |
| Sort |  |  |  |  |
| Show | Yes | Yes | Yes | Yes |
| Criteria |  |  | <=[Re-Order Level] |  |

### Today’s Deliveries

This shows what orders are being delivered today. This will help management to organise delivery staff and ensure that orders are delivered on time.

Tables used: Order, Client

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Field | Order ID | Client ID | Date of Order | Delivery Date | First Name | Surname |
| Table | Order | Order | Order | Order | Client | Client |
| Sort |  |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | Yes | Yes |
| Criteria |  |  |  | Date() |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Field | Address 1 | Address 2 | Postcode | Phone No | Cancelled |
| Table | Client | Client | Client | Client | Order |
| Sort |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | No |
| Criteria |  |  |  |  |  |

### Deliveries for the next week

This show the orders that will be delivered for the next seven days. This will help management to organise delivery staff and ensure that orders are delivered on time.

Tables used: Order, Client

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Field | Order ID | Client ID | Date of Order | Delivery Date | First Name | Surname |
| Table | Order | Order | Order | Order | Client | Client |
| Sort |  |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | Yes | Yes |
| Criteria |  |  |  | Between Date() And Date()+7 |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Field | Address 1 | Address 2 | Postcode | Phone No | Cancelled |
| Table | Client | Client | Client | Client | Order |
| Sort |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | No |
| Criteria |  |  |  |  |  |

### Deliveries for the next 4 weeks

This show the orders that will be delivered for the next 28 days. This will help management to organise delivery staff and ensure that orders are delivered on time.

Tables used: Order, Client

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Field | Order ID | Client ID | Date of Order | Delivery Date | First Name | Surname |
| Table | Order | Order | Order | Order | Client | Client |
| Sort |  |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | Yes | Yes |
| Criteria |  |  |  | Between Date() And Date()+ 7 |  |  |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Field | Address 1 | Address 2 | Postcode | Phone No | Cancelled |
| Table | Client | Client | Client | Client | Order |
| Sort |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | No |
| Criteria |  |  |  |  |  |

### Overdue Payments

This is a query that shows the orders that the payment is overdue on. This will help the company’s accounts department to keep track of payments.

Tables used: Order, Client

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Field | Payment Due Date | Paid | Order ID | Client ID | First Name | Surname | Phone No | Email |
| Table | Order | Order | Order | Order | Client | Client | Client | Client |
| Sort |  |  |  |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Criteria | <=Date() | No |  |  |  |  |  |  |

### Current Stock Levels

This can be used by management to see the current stock levels of all product.

Table used: Product

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field | Product ID | Product Name | Stock Amount | Re-Order Level |
| Table | Product | Product | Product | Product |
| Sort |  |  |  |  |
| Show | Yes | Yes | Yes | Yes |
| Criteria |  |  |  |  |

### Orders by staff within specified period

This shows how many orders members of staff have taken between two points in time, as well as when the order was placed. This will help management to see which staff are preforming well.

Tables used: Staff, Order

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Field | Staff ID | First Name | Surname | Order ID | Date of Order |
| Table | Staff | Staff | Staff | Order | Order |
| Sort |  |  |  |  |  |
| Show | Yes | Yes | Yes | Yes | Yes |
| Criteria |  |  |  |  | >=[Start Date] And <=[End Date] |

### Comparing the Price of Products from Suppliers

This query shows how much that each supplier is selling a product for. This can be used by management to compare the price of a product between suppliers and order the cheapest product.

Tables used: Product, Supplier, Supplier-Product

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field | Product ID | Supplier ID | Supplier Name | Cost |
| Table | Product | Supplier | Supplier | Supplier - Product |
| Sort |  |  |  |  |
| Show | Yes | Yes | Yes | Yes |
| Criteria | [Please enter the Products ID] |  |  |  |

### Product Sales in Quarter 1 of the Financial Year

This query shows how many of each product have been sold in the first quarter of the financial year. This will help the company to keep track of sales, they can compare sales with quarter 1 of the previous year to see if sales are up or down. They can also compare to the previous quarter to give them information on how the company is performing.

Tables used: Product, Order-Product, Order

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field | Product Name | Product ID | Quantity | Month([Date of Order]) |
| Table | Product | Product | Order-Product |  |
| Total | Group By | Group By | Sum | Group By |
| Sort |  |  |  |  |
| Show | Yes | Yes | Yes | No |
| Criteria |  |  |  | >=1 And <=3 |

### Product Sales in Quarter 2 of the Financial Year

This query shows how many of each product have been sold in the second quarter of the financial year. This will help the company to keep track of sales, they can compare sales with quarter 2 of the previous year to see if sales are up or down. They can also compare to the previous quarter to give them information on how the company is performing.

Tables used: Product, Order-Product, Order

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field | Product Name | Product ID | Quantity | Month([Date of Order]) |
| Table | Product | Product | Order-Product |  |
| Total | Group By | Group By | Sum | Group By |
| Sort |  |  |  |  |
| Show | Yes | Yes | Yes | No |
| Criteria |  |  |  | >=4 And <=6 |

### Product Sales in Quarter 3 of the Financial Year

This query shows how many of each product have been sold in the third quarter of the financial year. This will help the company to keep track of sales, they can compare sales with quarter 3 of the previous year to see if sales are up or down. They can also compare to the previous quarter to give them information on how the company is performing.

Tables used: Product, Order-Product, Order

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field | Product Name | Product ID | Quantity | Month([Date of Order]) |
| Table | Product | Product | Order-Product |  |
| Total | Group By | Group By | Sum | Group By |
| Sort |  |  |  |  |
| Show | Yes | Yes | Yes | No |
| Criteria |  |  |  | >=7 And <=9 |

### Product Sales in Quarter 4 of the Financial Year

This query shows how many of each product have been sold in the fourth quarter of the financial year. This will help the company to keep track of sales, they can compare sales with quarter 4 of the previous year to see if sales are up or down. They can also compare to the previous quarter to give them information on how the company is performing.

Tables used: Product, Order-Product, Order

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Field | Product Name | Product ID | Quantity | Month([Date of Order]) |
| Table | Product | Product | Order-Product |  |
| Total | Group By | Group By | Sum | Group By |
| Sort |  |  |  |  |
| Show | Yes | Yes | Yes | No |
| Criteria |  |  |  | >=10 And <=12 |

### Analysis of Orders in Quarter 1 of the Financial Year

This query will allow the company to compare the number of orders in quarter 1 to the same quarter of previous years.

Table used: Order

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Order ID | Date of Order | Month([Date of Order]) |
| Table | Order | Order |  |
| Total | Count | Group By | Group By |
| Sort |  |  |  |
| Show | Yes | Yes | No |
| Criteria |  |  | >=1 And <=3 |

### Analysis of Orders in Quarter 2 of the Financial Year

This query will allow the company to compare the number of orders in quarter 2 to the same quarter of previous years.

Table used: Order

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Order ID | Date of Order | Month([Date of Order]) |
| Table | Order | Order |  |
| Total | Count | Group By | Group By |
| Sort |  |  |  |
| Show | Yes | Yes | No |
| Criteria |  |  | >=4 And <=6 |

### Analysis of Orders in Quarter 3 of the Financial Year

This query will allow the company to compare the number of orders in quarter 3 to the same quarter of previous years.

Table used: Order

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Order ID | Date of Order | Month([Date of Order]) |
| Table | Order | Order |  |
| Total | Count | Group By | Group By |
| Sort |  |  |  |
| Show | Yes | Yes | No |
| Criteria |  |  | >=7 And <=9 |

### Analysis of Orders in Quarter 4 of the Financial Year

This query will allow the company to compare the number of orders in quarter 4 to the same quarter of previous years.

Table used: Order

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Order ID | Date of Order | Month([Date of Order]) |
| Table | Order | Order |  |
| Total | Count | Group By | Group By |
| Sort |  |  |  |
| Show | Yes | Yes | No |
| Criteria |  |  | >=10 And <=12 |

## **Update Queries**

### Change Stock Amount

This query is used to add new or remove stock to the database.

Query Type: Update

Table used: Product

|  |  |  |
| --- | --- | --- |
| Field | Stock Amount | Product ID |
| Table | Product | Product |
| Update to | [Stock Amount] + [Enter Stock Amount Bought] |  |
| Criteria |  | [Please Enter the Product ID] |

### Cancel Order

This query allows users to cancel an order.

Query Type: Update

Table used: Order

|  |  |  |
| --- | --- | --- |
| Field | Cancelled | Order ID |
| Table | Order | Order |
| Update to | Yes |  |
| Criteria |  | [Please Enter Order ID] |

### Change Delivery Date

This query can be used to update a change to an order delivery date.

Query Type: Update

Table used: Order

|  |  |  |
| --- | --- | --- |
| Field | Delivery Date | Order ID |
| Table | Order | Order |
| Update to | [Delivery Date] + [Enter the Number of Days Added] |  |
| Criteria |  | [Please Enter Order ID] |

### Change Product Price

This query can be used to update a change to a product selling price.

Query Type: Update

Table used: Product

|  |  |  |
| --- | --- | --- |
| Field | Selling Price | Product |
| Table | Product | Product |
| Update to | [Selling Price] + [Please enter the change in price] |  |
| Criteria |  | [Please Enter Product ID] |

### Change the cost price of a product from a Supplier

This query can be used to update a change to the cost price of a product from a supplier.

Query Type: Update

Table used: Supplier-Product

|  |  |  |  |
| --- | --- | --- | --- |
| Field | Cost | Supplier ID | Product ID |
| Table | Supplier-Product | Supplier-Product | Supplier-Product |
| Update to | [Enter the new Price] |  |  |
| Criteria |  | [Enter the Supplier ID] | [Enter the Product ID] |

### Order Paid

This query can be used by staff to mark an order as paid.

Query Type: Update

Table used: Order

|  |  |  |
| --- | --- | --- |
| Field | Order ID | Paid |
| Table | Order | Order |
| Update to |  | Yes |
| Criteria | [Enter the Order ID] |  |

### Order Delivered

This query can be used by staff to mark an order as delivered.

Query Type: Update

Table used: Order

|  |  |  |
| --- | --- | --- |
| Field | Order ID | Delivered |
| Table | Order | Order |
| Update to |  | Yes |
| Criteria | [Enter the Order ID] |  |

# **Form Design**

These Form designs are an overview of what the users will see when they are using the new system. The forms function as an interface where the users can access and enter data into the database without going directly into the database, which is more user friendly as it is easier to understand and use without understanding how to use the system.

### Client Form

The client form is used to enter new clients into the database as well as editing preexisting details.

Client Details

Client ID

First Name

Surname

Date of Birth

Address 1

Address 2

Postcode

Phone No.

Email

Client Type ID

First Client

Previous Client

Next Client

Last Client

New Client

Print

Save

Delete Client

Text: Calibri (Body), Size 12, Colour = Black, Central alignment

Client Form Header – Title: Calisto MT, Size 18, Colour = Black

Buttons used to help the user navigate through all records as well as create, delete, save and print the details of the clients

Close Form

### Staff Form

The staff form is used to enter new staff members into the database as well as editing preexisting details.

Staff Details

Staff ID

Department ID

First Name

Surname

Address 1

Address 2

Postcode

Phone No.

Email

First Staff member

Previous Staff member

Next Staff member

Last Staff member

New Staff member

Print

Save

Delete Staff member

Staff Form Header – Title: Calisto MT, Size 18, Colour = Black

Buttons used to help the user navigate through all records as well as create, delete, save and print the details of the staff members

Text: Calibri (Body), Size 12, Colour = Black, Central alignment

Close Form

### Supplier Form

The supplier form is used to enter new suppliers into the database as well as editing preexisting details.

Supplier Details

Supplier ID

Supplier Name

Address 1

Address 2

Postcode

Phone No.

Email

First Supplier

Previous Supplier

Next Supplier

Last Supplier

New Supplier

Print

Save

Delete Supplier

Staff Form Header – Title: Calisto MT, Size 18, Colour = Black

Buttons used to help the user navigate through all records as well as create, delete, save and print the details of the suppliers

Text: Calibri (Body), Size 12, Colour = Black, Central alignment

Close Form

### Product Form

The product form is used to enter new products into the database as well as editing preexisting details.

Product Details

Product ID

Product Name

Stock Amount

Re-order level

Selling Price

First Product

Previous Product

Next Product

Last Product

New Product

Print

Save

Delete Product

Staff Form Header – Title: Calisto MT, Size 18, Colour = Black

Text: Calibri (Body), Size 12, Colour = Black, Central alignment

Buttons used to help the user navigate through all records as well as create, delete, save and print the details of products

Close Form

### Department Form

The product form is used to enter new products into the database as well as editing preexisting details.

Department Details

Department ID

Department Name

First Department

Previous Department

Next Department

Last Department

New Department

Print

Save

Delete Department

Staff Form Header – Title: Calisto MT, Size 18, Colour = Black

Text: Calibri (Body), Size 12, Colour = Black, Central alignment

Buttons used to help the user navigate through all records as well as create, delete, save and print the details of departments

Close Form

# **Report Design**

Reports are created using the data collected from a query that is rearranged to be more user friendly.

## **Basic Queries**

### Client by Surname

This report will create a list of every client with the surname entered. This will make it easier to find the details of a client without needing to know the clients ID.

Client by Surname

Surname

First Name

Phone No

Postcode

Address 2

Address 1

Email

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Staff by Department

This allows the user to create a list of every member of staff within a department. This can be used by management to allocate work to staff members within a department.

Staff by Department

Department Name

Staff ID

Phone No

Surname

First name

Email

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Find Order by Order ID

Order

Order ID

=Now()

="Page " & [Page] & " of " & [Pages]

Client ID

First Name

Surname

Address 1

Address 2

Postcode

Phone No

Email

Date of Order

Delivery Date

Delivered

Cancelled

Paid

Payment Due Date

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

This can be used to get all the details of

an order with its order ID.

This will help management to deal with

customer queries about an order quicker.

### Order by Client ID

This can be used to find all orders for a client from their client ID. This will be useful when a client contacts the company with a query about an order.

Order by Client ID

Client ID

Date of Order

Delivered

Delivery Date

Order ID

Paid

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

First Name

Surname

### Client by Client ID

This can be used to find the details of a Client using their Client ID. This can be used to find the details of a Client quickly to assist with queries from a client.

Client by Client ID

Client ID

Address 2

Address 1

Surname

First Name

Postcode

=Now()

="Page " & [Page] & " of " & [Pages]

Phone No

Email

Type ID

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Staff by Surname

This can be used to find the details of a member of staff with their surname. This can be used to find contact information for the staff member.

Staff by Surname

Surname

First Name

Phone No

Postcode

Department ID

Staff ID

Email

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Supplier by Supplier ID

This report can be used to find the details of a supplier by using their supplier ID. This can be useful to find a supplier contact details when re-ordering stock.

Supplier by Supplier ID

Supplier ID

Address 2

Address 1

Supplier Name

Postcode

=Now()

="Page " & [Page] & " of " & [Pages]

Phone No

Email

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Supplier by Supplier Name

This report can be used to find the details of a supplier by using the name of the company. This can be useful to find a supplier contact details when re-ordering stock.

Supplier by Supplier Name

Supplier Name

Address 2

Address 1

Supplier ID

Postcode

=Now()

="Page " & [Page] & " of " & [Pages]

Phone No

Email

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Product by Product ID

This can be used to find the details about a product using its product ID.

Product by Product ID

Product ID

Re-Order Level

Stock Amount

Product Name

=Now()

="Page " & [Page] & " of " & [Pages]

Selling Price

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Product from Suppliers

This report can be used to find the details of the products sold by a supplier.

Product from Suppliers

Supplier ID

Product ID

Product Name

Cost

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

## **Further Queries**

### Products sold in a certain month

This allows the user to see how much of each product has been sold within each month of the year. This will help the company to keep track of popular products.

Products sold in a month

Sum of Quantity

Product ID

Product Name

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Orders in specified period

This allows the user to find all orders entered between two points in time. This could be used as a tool by management to track monthly sales.

Orders in specified period

Date of Order by Month

Cancelled

Delivery Date

Date of Order

Order ID

Payment Due Date

=Now()

="Page " & [Page] & " of " & [Pages]

Client ID

First Name

Surname

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Stock under Re-order Level

This report creates a list of every product that needs to be re-ordered. This will help management to have a more effective stock control system.

Overdue Payments

Product ID

Product Name

Re-order Level

Stock Amount

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Today’s Deliveries

This allows the user to create a list of all orders that are being delivered today and where they are being delivered to. This will help management to organise delivery staff and ensure that orders are delivered on time.

Todays Deliveries

First Name

Surname

Phone No

Postcode

Address 2

Address 1

Order ID

=Now()

="Page " & [Page] & " of " & [Pages]

Client ID

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Deliveries for the next week

This allows the user to see what orders will be delivered within the next seven days. This will help management to organise delivery staff and ensure that orders are delivered on time.

Deliveries for the next week

Delivery Date by Month

Delivery Date

Surname

First Name

Client ID

Order ID

Address 1

=Now()

="Page " & [Page] & " of " & [Pages]

Address 2

Postcode

Phone No

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Deliveries for the next 4 weeks

This allows the user to see what orders will be delivered within the next 28 days. This will help management to organise delivery staff and ensure that orders are delivered on time.

Deliveries for the next 4 weeks

Delivery Date by Month

Delivery Date

Surname

First Name

Client ID

Order ID

Address 1

=Now()

="Page " & [Page] & " of " & [Pages]

Address 2

Postcode

Phone No

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Overdue Payments

This allows the user to see what clients have overdue payments, as well as how many orders they have overdue and when they should have been paid.

Overdue Payments

First Name

Surname

Order ID

Payment Due Date

Email

Phone No

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Current Stock Levels

This can be used by management to see the current stock levels of all product.

Current Stock Levels

Product ID

Product Name

Stock Amount

Re-Order Level

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

## **Further Queries - Charts**

Orders by staff within specified period

Staff ID

First Name

Date of Order

Order ID

Surname

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

Numbers

Staff IDs

Text: Calibri (Body), Size 10, Colour = Gray, Left alignment

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Orders by staff within specified period

This shows how many orders members of staff have taken between two points in time, as well as when the order was placed. This will help management to see which staff are preforming well.

### Comparing the Price of Products from Suppliers

This report shows how much that each supplier is selling a product for. This can be used by management to compare the price of a product between suppliers and order the cheapest product.

Comparing the Price of Products from Suppliers

Product ID

Cost

Supplier Name

Supplier ID

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

Numbers

Suppliers

Text: Calibri (Body), Size 10, Colour = Gray, Left alignment

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

### Product Sales in Quarter 1 of the Financial Year

This report shows how many of each product have been sold in the first quarter of the financial year. This will help the company to keep track of sales, they can compare sales with quarter 1 of the previous year to see if sales are up or down. They can also compare to the previous quarter to give them information on how the company is performing.

Sales in Quarter 1 of the Financial Year

Product ID

Sum of Quantity

Product Name

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

Numbers

Product IDs

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

Text: Calibri (Body), Size 10, Colour = Gray, Left alignment

### Product Sales in Quarter 2 of the Financial Year

This report shows how many of each product have been sold in the second quarter of the financial year. This will help the company to keep track of sales, they can compare sales with quarter 2 of the previous year to see if sales are up or down. They can also compare to the previous quarter to give them information on how the company is performing.

Sales in Quarter 2 of the Financial Year

Product ID

Sum of Quantity

Product Name

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

Numbers

Product IDs

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

Text: Calibri (Body), Size 10, Colour = Gray, Left alignment

### Product Sales in Quarter 3 of the Financial Year

This report shows how many of each product have been sold in the third quarter of the financial year. This will help the company to keep track of sales, they can compare sales with quarter 3 of the previous year to see if sales are up or down. They can also compare to the previous quarter to give them information on how the company is performing.

Sales in Quarter 3 of the Financial Year

Product ID

Sum of Quantity

Product Name

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

Numbers

Product IDs

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

Text: Calibri (Body), Size 10, Colour = Gray, Left alignment

### Product Sales in Quarter 4 of the Financial Year

This report shows how many of each product have been sold in the fourth quarter of the financial year. This will help the company to keep track of sales, they can compare sales with quarter 4 of the previous year to see if sales are up or down. They can also compare to the previous quarter to give them information on how the company is performing.

Sales in Quarter 4 of the Financial Year

Product ID

Sum of Quantity

Product Name

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

Numbers

Product IDs

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

Text: Calibri (Body), Size 10, Colour = Gray, Left alignment

### Analysis of Orders in Quarter 1 of the Financial Year

This report will allow the company to compare the number of orders in quarter 1 to the same quarter of previous years. This will be a useful report for management to compare orders from year to year to check how well the company is performing.

Analysis of Quarter 1 of the Financial Year

CountOfOrder ID

Date of Order

By Year

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Right alignment

Numbers

Years

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

Text: Calibri (Body), Size 10, Colour = Gray, Left alignment

Years Total

### Analysis of Orders in Quarter 2 of the Financial Year

This report will allow the company to compare the number of orders in quarter 2 to the same quarter of previous years. This will be a useful report for management to compare orders from year to year to check how well the company is performing.

Analysis of Quarter 2 of the Financial Year

CountOfOrder ID

Date of Order

By Year

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Right alignment

Numbers

Years

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

Text: Calibri (Body), Size 10, Colour = Gray, Left alignment

Years Total

### Analysis of Orders in Quarter 3 of the Financial Year

This report will allow the company to compare the number of orders in quarter 3 to the same quarter of previous years. This will be a useful report for management to compare orders from year to year to check how well the company is performing.

Analysis of Quarter 3 of the Financial Year

CountOfOrder ID

Date of Order

By Year

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Right alignment

Numbers

Years

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

Text: Calibri (Body), Size 10, Colour = Gray, Left alignment

Years Total

### Analysis of Orders in Quarter 4 of the Financial Year

This report will allow the company to compare the number of orders in quarter 4 to the same quarter of previous years. This will be a useful report for management to compare orders from year to year to check how well the company is performing.

Analysis of Quarter 4 of the Financial Year

CountOfOrder ID

Date of Order

By Year

=Now()

="Page " & [Page] & " of " & [Pages]

Client Form Header – Title: Calisto MT, Size 20, Colour = Black

Text: Calibri (Body), Size 11, Colour = Black, Right alignment

Numbers

Years

Text: Calibri (Body), Size 11, Colour = Black, Left alignment

Text: Calibri (Body), Size 10, Colour = Gray, Left alignment

Years Total

# **Macros**

Macros are commonly used as a tool to automate specific tasks. The advantage to using a macro is that you can simplify completing repetitive tasks by linking them to a button rather than having to restart the process each time.

## Change Stock Amount

This macro is used to add new or remove stock to the database.

|  |  |
| --- | --- |
| Action | Update Stock Amount |
| Query Name | Change Stock Amount |
| View | Datasheet |
| Data Mode | Edit |

## Cancel Order

This macro allows users to cancel an order.

|  |  |
| --- | --- |
| Action | Update Cannceled |
| Query Name | Canncel Order |
| View | Datasheet |
| Data Mode | Edit |

## Change Delivery Date

This macro can be used to update a change to an order delivery date.

|  |  |
| --- | --- |
| Action | Update Delivery Date |
| Query Name | Change Delivery Date |
| View | Datasheet |
| Data Mode | Edit |

## Change Product Price

This macro can be used to update a change to a product selling price.

|  |  |
| --- | --- |
| Action | Update Price |
| Query Name | Change Product Price |
| View | Datasheet |
| Data Mode | Edit |

## Change the cost price of a product from a Supplier

This macro can be used to update a change to the cost price of a product from a supplier.

|  |  |
| --- | --- |
| Action | Update Cost |
| Query Name | Change the cost price of a product from a Supplier |
| View | Datasheet |
| Data Mode | Edit |

## Order Paid

This macro can be used by staff to mark an order as paid.

|  |  |
| --- | --- |
| Action | Update Paid |
| Query Name | Order Paid |
| View | Datasheet |
| Data Mode | Edit |

## Order Delivered

This macro can be used by staff to mark an order as delivered.

|  |  |
| --- | --- |
| Action | Update Delivered |
| Query Name | Order Delivered |
| View | Datasheet |
| Data Mode | Edit |

# **User Interface Design**

The switchboard is used to simplify navigation, so that the application is more accessible to users. It is a form that is made up of buttons which are programmed to link forms, reports, and macros in the database. The user interface design should meet the user requirements set out in the analysis section. Two of the requirements are, that the new system should be easy for users to use and understand and look pleasant to users.

**Colours**

The colour that is primarily used for Beltel Hotel Spas form and reports is a shade of green. This colour helps to create a standout header on the forms and reports and adds a professional appearance to the company’s forms and reports.

**Font**

The fonts that are used for the database for Beltel Hotel Spa are:

* Calisto MT is used for the titles on forms and reports so that they are clear and understandable to the user. The use of Calisto MT also allows the titles to stand out more.
* Tahoma is the font used in the switchboard menu as it allows the items on the menu to stand out for the user, but within the forms and reports Calibri (Detail) is used for all the data within the fields as it looks more professional. Throughout the user interface text is clear and easy for the user to read.

|  |  |
| --- | --- |
| Main Switchboard | * Clients * Orders * Deliveries * Staff * Stock * Suppliers * Exit |
| Analysis of Orders in the Financial Year | * Analysis of Orders in Quarter 1 of the Financial Year * Analysis of Orders in Quarter 2 of the Financial Year * Analysis of Orders in Quarter 3 of the Financial Year * Analysis of Orders in Quarter 4 of the Financial Year * Return |
| Clients | * Client Details * Find Client by Client ID * Find Client by Surname * Return |
| Deliveries | * Today’s Deliveries * Deliveries for the next week * Deliveries for the next 4 weeks * Change Delivery Date * Order Delivered * Return |
| Invoice | * Return |
| Macros for Orders | * Cancel Order * Order Paid * Return |
| Orders | * Invoice * Macros for Orders * Find Orders by Order ID * Find Order by Client ID * Orders in specified period * Overdue Payments * Analysis of Orders in the Financial Year * Return |
| Sales in the Financial Year | * Sales in Quarter 1 of the Financial Year * Sales in Quarter 2 of the Financial Year * Sales in Quarter 3 of the Financial Year * Sales in Quarter 4 of the Financial Year * Return |
| Staff | * Staff Details * Department Details * Find Staff by Surname * Find Staff by Department * Orders by staff within specified period * Return |
| Stock | * Product Details * Product by Product ID * Products sold in a certain month * Current Stock Levels * Stock under Re-order Level * Sales in the Financial Year * Change Product Price * Return |
| Suppliers | * Supplier Details * Find Supplier by Supplier ID * Find Supplier by Supplier Name * Change the cost price of product * Return |

Main Menu

Main Menu

Clients

Orders

Deliveries

Staff

Stock

Suppliers

Exit

Text: Tahoma, Size: 8, Colour: Black, Left Aligned

Text: Calisto MT, Size: 18, Colour: White, Left Aligned

This is what the Beltel Hotel Spa Main Menu will look like and what will be displayed on it. From this menu it will show 6 sub-menu options which will allow the user to access clients, orders, deliveries, staff, stock, and suppliers. There is also a button to exit and close the application.

Clients

Clients

Client Details

Find Client by Client ID

Find Client by Surname

Return

Text: Tahoma, Size: 8, Colour: Black, Left Aligned

Text: Calisto MT, Size: 18, Colour: White, Left Aligned

This is what the Beltel Hotel Spa Clients Sub-Menu will look like and what will be displayed on it. From this menu it will show 3 options which will allow the user to access client’s information using forms and reports. There is also a button to return to the main menu.

Orders

Orders

Invoice

Macros for Orders

Find Order by Order ID

Find Order by Client ID

Orders in specified period

Overdue Payments

Analysis of Orders in Financial Year

Return

Text: Tahoma, Size: 8, Colour: Black, Left Aligned

Text: Calisto MT, Size: 18, Colour: White, Left Aligned

This is what the Beltel Hotel Spa Orders Sub-Menu will look like and what will be displayed on it. From this menu it will show 7 options which will allow the user to access information about orders using forms and reports. The Invoice, Macros for Orders and Analysis of Orders in Financial Year buttons take you to a further sub-menu (see below) where there is more detailed information available. There is also a button to return to the main menu.

Invoice

Invoice

(Place Holder)

(Place Holder)

Return

Text: Tahoma, Size: 8, Colour: Black, Left Aligned

Text: Calisto MT, Size: 18, Colour: White, Left Aligned

Macros for Orders

Macros for Orders

Cancel Order

Order Paid

Return

Text: Tahoma, Size: 8, Colour: Black, Left Aligned

Text: Calisto MT, Size: 18, Colour: White, Left Aligned

This is what the Macros for Orders Sub-Menu will look like and what will be displayed on it. From this menu the user can access two macros which allow the user to cancel orders and to mark orders as paid. There is also a button to return to the orders sub-menu.

Analysis of Orders in the Financial Year

Analysis of Orders in the Financial Year

Analysis of Orders in Quarter 1 of the Financial Year

Analysis of Orders in Quarter 2 of the Financial Year

Analysis of Orders in Quarter 3 of the Financial Year

Analysis of Orders in Quarter 4 of the Financial Year

Return

Text: Tahoma, Size: 8, Colour: Black, Left Aligned

Text: Calisto MT, Size: 18, Colour: White, Left Aligned

This is what the Analysis of Orders in the Financial Year Sub-Menu will look like and what will be displayed on it. From this menu the user can access quarterly reports. There is also a button to return to the orders sub-menu.

Deliveries

Deliveries

Todays Deliveries

Deliveries for the next week

Deliveries for the next 4 weeks

Change Delivery Date

Order Delivered

Return

Text: Tahoma, Size: 8, Colour: Black, Left Aligned

Text: Calisto MT, Size: 18, Colour: White, Left Aligned

This is what the Beltel Hotel Spa Deliveries Sub-Menu will look like and what will be displayed on it. From this menu it will show 5 options which will allow the user to access information about deliveries using forms and reports. From this menu the user can update delivery dates and mark orders as delivered. There is also a button to return to the main menu.

Staff

Staff

Staff Details

Department Details

Find Staff by Surname

Find Staff by department

Order by staff within specified period

Return

Text: Tahoma, Size: 8, Colour: Black, Left Aligned

Text: Calisto MT, Size: 18, Colour: White, Left Aligned

This is what the Beltel Hotel Spa Staff Sub-Menu will look like and what will be displayed on it. From this menu it will show 5 options which will allow the user to access information about staff using forms and reports. There is also a button to return to the main menu.

Stock

Stock

Product Details

Product by Product ID

Products sold in a certain month

Current Stock Levels

Stock under Re-Order Level

Sales in Financial Year

Change Product Price

Return

Text: Tahoma, Size: 8, Colour: Black, Left Aligned

Text: Calisto MT, Size: 18, Colour: White, Left Aligned

This is what the Beltel Hotel Spa Stock Sub-Menu will look like and what will be displayed on it. From this menu it will show 7 options which will allow the user to access information about stock using forms and reports. There is a macro which allows users to update product prices. The Sales in Financial Year button takes you to a further sub-menu (see below) where there is more detailed information available. There is also a button to return to the main menu.

Sales in the Financial Year

Sales in the Financial Year

Sales in Quarter 1 of the Financial Year

Sales in Quarter 2 of the Financial Year

Sales in Quarter 3 of the Financial Year

Sales in Quarter 4 of the Financial Year

Return

Text: Tahoma, Size: 8, Colour: Black, Left Aligned

Text: Calisto MT, Size: 18, Colour: White, Left Aligned

This is what the Sales in the Financial Year Sub-Menu will look like and what will be displayed on it. From this menu the user can access quarterly reports. There is also a button to return to the orders sub-menu.

Suppliers

Suppliers

Suppliers Details

Find Supplier by Supplier ID

Find Supplier by Supplier Name

Change the cost price of a product

Return

Text: Tahoma, Size: 8, Colour: Black, Left Aligned

Text: Calisto MT, Size: 18, Colour: White, Left Aligned

This is what the Beltel Hotel Spa Suppliers Sub-Menu will look like and what will be displayed on it. From this menu it will show 4 options which will allow the user to access information about suppliers using forms and reports. There is a macro which allows users to update cost price of products from suppliers. There is also a button to return to the main menu.

Hierarchal Diagram

This Hierarchal diagram will help programmers with understanding how the switchboard should be designed. When the database is opened it will start at the main menu, which will allow its users to access the sub-menus, through which they can access the forms, reports, and macros. Each of the sub-menus will have a button that will take the user to the menu that the user accessed it from.

Main Switchboard

Clients

Client Details

Find Client by Client ID

Find Client by Surname

Deliveries

Today’s Deliveries

Deliveries for the next week

Deliveries for the next 4 weeks

Change Delivery Date

Order Delivered

Analysis of Orders in the Financial Year

Analysis of Orders in Quarter 2 of the Financial Year

Analysis of Orders in Quarter 3 of the Financial Year

Analysis of Orders in Quarter 1 of the Financial Year

Analysis of Orders in Quarter 4 of the Financial Year

Macros for Orders

Cancel Order

Order Paid

Invoice

Orders

Find Order by Order ID

Find Order by Client ID

Orders in specified period

Overdue Payments

Staff

Staff Details

Department Details

Find Staff by Surname

Find Staff by Department

Order by staff within specified period

Sales in the Financial Year

Sales in Quarter 2 of the Financial Year

Sales in Quarter 3 of the Financial Year

Sales in Quarter 1 of the Financial Year

Sales in Quarter 4 of the Financial Year

Stock

Product Details

Product by Product ID

Products sold in a certain month

Current Stock Levels

Stock under Re-order Level

Change Product Price

Suppliers

Supplier Details

Find Supplier by Supplier ID

Find Supplier by Supplier Name

Change the cost price of a product

Return

Return

Return

Return

Return

Return

Return

Return

Return

Exit