
Sample Assignment: Unit 18 Database Design

ASSIGNMENT 1 – PERFECT PIZZA DELIVERY

This assignment will allow you to meet all of the assessment requirements for Unit 18: *Database Design*. You should look at the Assessment Evidence Grid to check what you need to demonstrate in each task to achieve each mark band.

1 Introduction

'Perfect Pizza Delivery' is a new home delivery pizza service that is about to open in Sheffield. The manager Mr. Rossi has years of experience running takeaway shops and has just moved to Sheffield from the south. He is fed up with the normal problems faced by pizza shops:

- Arguments about the final bill
- Complaints about the wait being too long when it has not
- Getting orders wrong
- Losing peoples' orders
- Delivering to the wrong address.

In his past shops all administration has been carried out using scraps of paper. When an order is taken, a customer's name, phone number and address are asked for first. These are jotted down along with the order on a piece of paper and handed to the kitchen staff who prepare, cook and pack the food. The same scrap of paper has a final price scribbled on it and is stapled to the bag ready for the delivery driver to despatch it. Mr. Rossi wants a better way of doing things:

"In a busy kitchen the pieces of paper often get lost or dirty, a bit of grease on the order could result in the wrong pizza being made, or it being delivered to the wrong address. This costs me money and upsets my customers".

He has asked if you could design and build him a database system, which will assist him in operating his delivery service. He has little computer experience so the system will need to be as easy as possible to use.

2 Required Order Process

Customers will need to be registered, with their name, address and phone number. Once registered, customers can phone up and order the food they require by quoting their customer number (or name / address if they can't remember it). Customers select which pizza(s) they require and how many they want. The order is then assembled and delivered to the customer. When an order is taken, a note needs to be made of the time and date when it was made, and the member of staff who has taken it. The order value has to be more than £8 otherwise a £2 delivery charge is applied.

3 Planning

Before you start creating the database on the computer you will need to plan your database by producing the following:

- Detailed notes to identify that the data is correctly normalised to at least first normal form (1NF) – to achieve mark band 3 you must show that the data is correctly normalised to third normal form (3NF)
- An entity relationship diagram (ERD)
- A data dictionary
- Draft designs of the user interface, reports and data entry forms.

4 User Requirements

Mr Rossi has requested that the system is capable of performing the following:

- Create, read, update and delete customer and pizza information using data input forms which validate the input data
- Provide a facility to suspend a customer who has either provided false information or ordered food and not paid for it when delivered
- Allow staff to create/read/update/cancel an order for multiple pizzas
- Print off a receipt for an order clearly showing the food ordered, total cost, delivery address and whether delivery is free or not
- Print out reports showing:
 - (i) The last month's orders grouped by customer and sorted by date
 - (ii) Details of customers who have not ordered a pizza for 2 months.
- Provide a facility that will create and print a simple menu which can be handed out.

5 What to Produce

A working relational database with at least **three** related tables and an easy to use user interface plus the following documentation:

Technical Documentation

- A copy of the specification agreed with the user
- Details of hardware, software and other resources required
- Detailed notes to identify that the data is correctly normalised to 1NF or 3NF
- An ERD
- A data dictionary that includes the range of acceptable data
- Draft designs of user interface, reports and data entry forms
- Annotated reports, queries and data entry forms
- Details of any program code (macros)
- Test procedures and proof of testing.

User Manual

This needs to be simple enough for a novice to use the system and explain step by step how to do each task in your database. It should also include example forms and reports.

Evaluation

Evaluate your completed database commenting on how well your solution meets the user requirements, identifying strengths and weaknesses and make suggestions for improvements taking into account of user feedback.

You should also produce an evaluation of your own performance in creating the database and associated documentation. This should include strengths and weaknesses and suggest improvements to show how you could be more effective in the future.

Attached is a copy of the layout of a receipt Mr. Rossi has seen used by another pizza delivery company, a list of customer details and a sample menu which he thought might help you.

Express Pizza Deliveries

RECEIPT

Date:

Time:

Customer No:

Customer Name:

Customer Address:

Telephone Number:

Staff Name:

ORDER

Pizza	Quantity	Cost	Total
Sub Total			
Delivery charge			
Total			

CUSTOMER DETAILS

Customer Name	Address	Telephone number
Mrs A Davidson	23 Moorland Road, Hathersage, Sheffield S60 1NE	222111
Mr D Davis	43 Crossland Place, Sheffield S9 7GF	333444
Ms A Marples	92 Greenlands Road, Grenoside, Sheffield S35 7QH	111333
Mr A Hall	59 Welbeck Road, Sheffield S6 4NE	111222
Mrs A Smith	31 Raleigh Road, Sheffield S2 8BE	111444
Mr T Hawley	91 Occupation Lane, Sheffield S12 9HR	222333
Mrs P Roberts	48 Coombe Place, Sheffield S10 2SE	222444
Ms J Torrington	49 Romandale Road, Sheffield S2 1AW	333111
Mr K Benn	123 Emerson Crescent, Sheffield S5 4FR	333222
Miss M Presswood	12 Stonewood Grove, Sheffield S10,4NM	333444

PIZZAS

Pizza Name	10"	12"
Express Special	4.90	7.80
Hot Vegetarian		
Meat Feast		
Hot & Spicy	4.50	7.50
Beef Eater		
Seafood		
Della		
Hawaiian	4.30	6.90
Tuna Delight		
Funghi		