

Programming task - Takeaway Pizza Shop Program

Brief:

You work for a small software company in Brighton and have been given the task of producing a program that meets the client's requirements.

The client is the owner of a local pizza restaurant and has commissioned you as a Junior Software Developer to write a program that will help their staff calculate the cost of takeaway pizza orders.

You need to create a program that will allow the staff to enter this information:

- customer name
- customer address
- customer phone number
- the quantity of pizzas being ordered
- the size of each pizza. An order can include different pizza sizes
- an option to add more toppings to the standard pizzas if required
- an option to request delivery.

The program should then provide the user with a personalised and itemised bill that shows:

- customer details
 - the cost of each pizza, showing standard cost of the pizza and any extra toppings
 - any discount applied
 - any delivery charge
 - the total cost of the order.

When you are creating your solution ensure that:

- standard programming conventions have been followed
- it is efficient and robust
- a suitable data structure is used
- outputs are meaningful
- it is easy to use
- the program is tested using normal, abnormal and extreme data
- there is an output displaying the personalised and itemised bill.

Information

You are provided with this information to use when designing and developing your program:

Minimum and maximum pizzas in any one order

Minimum quantity of pizzas = 1

Maximum quantity of pizzas = 6

Minimum and maximum toppings per pizza

Minimum number of toppings = 1

Maximum number of toppings = 6

Standard sizes and costs of pizzas

Small = £5.95

Medium = £7.50

Large = £10.95

Extra Large £14.95

Toppings

Anchovies

Bacon

Barbecue Drizzle

Chicken

Green Peppers

Ham

Onions

Pepperoni

Pineapple

Premium Cheese Blend

Vegan Cheese

Vegan Sausage

Cost of any extra toppings

1 extra topping = £0.75p

2 extra toppings = £1.35

3 extra toppings = £2.00

4 or more extra toppings = £2.50

Discount

10% discount for any orders over £20 before delivery cost is applied.

Delivery charge (Free for collection)

£2.50 standard charge.

Test plan

Use the attached test plan to plan the testing of your complete program.

You should complete these columns:

- Test number
- Purpose of test
- Data type
- Test data
- Expected result
- Actual result

- Comments

Normal data

This is test data that is typical (expected) and should be accepted by the program.

Extreme data

This is test data at the upper or lower limits of expectations that should be accepted by the program.

Abnormal data

Abnormal or erroneous data is data that falls outside of what is acceptable and should be rejected by the program. This could include invalid symbols or numerics where alphabetical characters are expected.