

Q1. Write C programs to get the following as outputs

1.

```
    1
  1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

2.

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
1 2 3 4
1 2 3
1 2
1
```

3.

```
5 4 3 2 1
4 3 2 1
3 2 1
2 1
1
```

Q2.

Write a C program as given below to order pizzas from “Pizza Paradise”.

Pizza Option	Description	Charges per pizza (LKR)		
		Personal Pizza (P)	Medium (M)	Large (L)
1	Italiano	560	920	1800
2	Cheesy Onion	340	660	1300
3	Hot Garlic Prawns	760	1100	2100

Topping Option	Extra Toppings	Charges per pizza (LKR)
1	Cheese	320
2	Olives	140
3	Bell Pepper	130
4	Pineapple	150

Input the “Option”, the size of the Pizza (P, M, L) and the number of pizzas ordered. Then the user should be prompted to input extra toppings by displaying a message “Do you need any extra toppings ?” If the user enters ‘y’ or ‘Y’ then the program should allow the user to input an extra topping and calculate the total Price. The user should be prompted to add extra toppings until he enters ‘n’ or ‘N’ to stop. Then the program should terminate after printing the total price for all the pizzas the user has ordered.

Your program should also display an error message if the user has entered an invalid option.

Save the program as *ITXXXXXX.c*

Sample output:

```
Input Pizza Option      : 3
Size of the Pizza ( P/M/L) : L
Number of Pizzas       : 2
Do you need any extra toppings ( y/n ) : y
Input your option : 1
Do you need any extra toppings ( y/n ) : y
Input your option : 2
Do you need any extra toppings ( y/n ) : n
Total Price Rs : 5120.00
```

Q3.

Hotel rates of ABC Hotels (Pvt) ltd. for full board and half board basis for one day are given below.

Type of room	Amount (Rs)	
	Full board (F)	Half Board (H)
1	25555.00	17250.00
2	17500.00	12250.00
3	9000.00	7250.00

As a part of the promotional campaign, discounts will be given for their 'Gold' , 'Silver' and 'Bronze' reward card holders as shown in the table below.

Card Type	Discount %
G	12.5
S	11.5
B	9.5

Write a C program to allow the user to enter the type of the room, accommodation type (F- Full Board, H- Half Board), number of days and the Card type (G, S, B) and calculate the amount need to be paid for the given no of days.

Your program should display an error message **"Invalid Type of room"** if the user inputs a wrong type for the room.

The program should allow the user to enter the orders until -1 is entered for the room type.

Format your output to two decimal places.

Sample Output:

```
Enter type of room : 2
Enter Accommodation Basis (F/H) : F
Enter No of days : 2
Enter Reward Card Type ( G, S, B ) : G
Amount(Rs.) : 30625.00
```

```
Enter type of room : -1
```