

## IN 1100 - Programming Fundamentals

### Assignment 1

Duration : 45 minutes

Write a C program to calculate the total bill of a customer in a holiday resort. The total bill is calculated for the reserved rooms and meals ordered at the resort.

The three types of rooms available in the resort and their prices per day are given below.

Room type	Room only	Room with meals
Single Room	Rs. 2000	Rs. 2500
Double Room	Rs. 4100	Rs. 5300
Triple Room	Rs. 6800	Rs. 7900

All the customers will get a **15%** tax added into their total bill, if the **total bill is between 15000 and 20000, exclusive**.

The program should **repeatedly** display a screen with options to the customer as given in the following screenshot until the user enters 'n' or 'N' for the last question.

```
Select the room type:
-Single
-Double
-Triple
Enter choice: s
Enter no.of days: 3
Do you want to order meals (y or n)? y
Do you want to reserve another room (y or n)? Y

Select the room type:
-Single
-Double
-Triple
Enter choice: T
Enter no.of days: 1
Do you want to order meals (y or n)? y
Do you want to reserve another room (y or n)? N

Total Bill = Rs.15400.00
Total Payable Amount = Rs.17710.00
```

The order of which the user inputs are needed to be taken is as follows;

1. Get **room type** (S/s, D/d, T/t, error message for other letters). Use a **switch case** for selection.
2. Get **number of days** (only integers)
3. Get the **choice of with meal or without meal** (y, n, error message for other letters). Use **if-else if** for selection.
4. Get the **choice of continuing the room reservation** (y – continue to the option to reserve another room, n – stop execution and display values for the current reservations)
5. Write a new function named “**calculateTotal()**” to calculate and return the total bill value.
6. Use the returned value to calculate the total payable amount and display both total bill and total bill amount.

Consider the following facts when writing the C program.

- Room type should be entered using the first letter of the room type.  
E.g: If a customer wants to reserve a double room → user input has to be ‘d’ or ‘D’.
- For 3,4 parts also both uppercase and lowercase characters are acceptable.
- Give suitable error messages when a user enters an incorrect room type and meal option.
- Use a do-while loop to repeat the reservation screen.