QNO.6 Given a positive integer denoting n, do the following: a. If 1<=n<=9, print lowercase English words corresponding to the numbers e.g. (one for 1, two for 2), b. If n>9 print greater than 9.

```c
PFlab > lab4 > C lab4q6.c > ⊙ main(void)
1    #include<stdio.h>
2    int main(void)
3    {
4        int n;
5        printf("Enter numbers from 1 to 9:");
6        scanf("%d",&n);
7
8        switch (n)
9        {
10           case 1:
11           printf("one\n");
12           break;
13
14           case 2:
15           printf("two\n");
16           break;
17
18           case 3:
19           printf("three\n");
20           break;
21
22           case 4:
23           printf("four\n");
24           break;
25
26           case 5:
27           printf("five\n");
28           break;
29
30           case 6:
31           printf("six\n");
32           break;
33
34           case 7:
35           printf("seven\n");
36           break;
37
38           case 8:
39           printf("eight\n");
40           break;
41
42           case 9:
43           printf("nine\n");
44           break;
45
46           default :
47           if(n <= 0)
48           {
49               printf("Please enter a number between 1 and 9.\n");
50           }
51           else {
52               printf("Number is greater than 9.\n");
53           }
54       }
55       return 0;
56   }
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS   SEARCH ERROR

PS C:\UNI ASSIGNMENT\pflab\lab4> .\lab4q6
Enter numbers from 1 to 9:10
Number is greater than 9.
Enter numbers from 1 to 9:10
Enter numbers from 1 to 9:10
Number is greater than 9.
PS C:\UNI ASSIGNMENT\pflab\lab4> .\lab4q6
Enter numbers from 1 to 9:0
Please enter a number between 1 and 9.

QNO.5 Write a program in C to calculate and print the Electricity bill of a given customer. The customer id., name and unit consumed by the user should be taken from the keyboard and display the total amount to pay to the customer. The charges are as follow: Unit Charge/Unit, up to 199 @16.20, 200 and above but less than 300 @20.10, 300 and above but less than 500 @27.10, 500 and above @35.90. If the bill exceeds Rs. 18000 then a surcharge of 15% will be charged on top of the bill.

```c
#include<stdio.h>
int main(void)
{
    char customer_name[30];
    int customer_ID;
    float units_consumed, tot_charges, sur_amount, net_amount;
    printf("Customer ID:");
    scanf("%d",&customer_ID);
    printf("Customer Name:");
    scanf(" %s",&customer_name);
    printf("Units Consumed:");
    scanf("%f",&units_consumed);
    if(units_consumed >= 1&&units_consumed <= 199)
    {
        tot_charges = units_consumed * 16.20;
        printf("Amount charges @16.20 per unit:%f",tot_charges);
        if(tot_charges >= 18000)
        {
            sur_amount = tot_charges * 0.15;
            printf("\nSurcharge amount:%f",sur_amount);
            net_amount = tot_charges + sur_amount;
            printf("\nNet amount paid by a customer:%f",net_amount);
        }
        else {
            printf("\nSurcharge amount: 0");
            printf("\nNet amount paid by a customer:%f",tot_charges);
        }
    }
    else if(units_consumed >= 200&&units_consumed < 300)
    {
        tot_charges = units_consumed * 20.10;
        printf("Amount charges @20.10 per unit:%f",tot_charges);
        if(tot_charges >= 18000)
        {
            sur_amount = tot_charges * 0.15;
            printf("\nSurcharge amount:%f",sur_amount);
            net_amount = tot_charges + sur_amount;
            printf("\nNet amount paid by a customer:%f",net_amount);
        }
        else {
            printf("\nSurcharge amount: 0");
            printf("\nNet amount paid by a customer:%f",tot_charges);
        }
    }
    else if(units_consumed >= 300&&units_consumed < 500)
    {
        tot_charges = units_consumed * 27.10;
        printf("Amount charges @27.10 per unit:%f",tot_charges);
        if(tot_charges >= 18000)
        {
            sur_amount = tot_charges * 0.15;
            printf("\nSurcharge amount:%f",sur_amount);
            net_amount = tot_charges + sur_amount;
            printf("\nNet amount paid by a customer:%f",net_amount);
        }
        else {
            printf("\nSurcharge amount: 0");
            printf("\nNet amount paid by a customer:%f",tot_charges);
        }
    }
    else if(units_consumed >= 500)
    {
        tot_charges = units_consumed * 35.90;
        printf("Amount charges @35.90 per unit:%f",tot_charges);
        if(tot_charges >= 18000)
        {
            sur_amount = tot_charges * 0.15;
            printf("\nSurcharge amount:%f",sur_amount);
            net_amount = tot_charges + sur_amount;
            printf("\nNet amount paid by a customer:%f",net_amount);
        }
        else {
            printf("\nSurcharge amount: 0");
            printf("\nNet amount paid by a customer:%f",tot_charges);
        }
    }
    else {
        printf("\nInvalid input");
    }
    return 0;
}
```

```
PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS   SEARCH ERROR

Customer ID:1101
Customer Name:jawad
Units Consumed:600
Amount charges @35.90 per unit:21540.000000
Surcharge amount:3231.000000
Net amount paid by a customer:24771.000000
PS C:\UNC ASSIGNMENT\pFLab\lab4> .\lab4q5
Customer ID:1102
Customer Name:abad
Units Consumed:300
Amount charges @27.10 per unit:8130.000000
Surcharge amount: 0
Net amount paid by a customer:8130.000000
PS C:\UNC ASSIGNMENT\pFLab\lab4>
```

QNO.4 An online shopping store is providing discounts on the items due to the Eid. If the cost of items is less than 2000 it will give a discount up to 5%. If the cost of shopping is 2000 to 4000, a 10% discount will be applied. If the cost of shopping is 4000 to 6000, a 20% discount will be applied. If it's more than 6000 then a 35% discount will be applied to the cost of shopping. Print the actual amount, saved amount and the amount after discount. The Minimum amount eligible for a discount is 500.

```c
PFlab > lab4 > C lab4q4.c > ⊘ main(void)
1    #include<stdio.h>
2    int main(void)
3    {
4        float cost, pay_aft_dis, dis;
5        printf("Enter the cost: ");
6        scanf("%f",&cost);
7        if(cost >= 500&&cost < 2000)
8        {
9            printf("The cost is:%f\n",cost);
10           dis = cost * 0.05;
11           printf("The discount is:%f\n",dis);
12           pay_aft_dis = cost - dis;
13           printf("The payment after discount is:%f\n",pay_aft_dis);
14       }
15       else if(cost >= 2000&&cost < 4000)
16       {
17           printf("The cost is:%f\n",cost);
18           dis = cost * 0.1;
19           printf("The discount is:%f\n",dis);
20           pay_aft_dis = cost - dis;
21           printf("The payment after discount is:%f\n",pay_aft_dis);
22       }
23       else if(cost >= 4000&&cost < 6000)
24       {
25           printf("The cost is:%f\n",cost);
26           dis = cost * 0.2;
27           printf("The discount is:%f\n",dis);
28           pay_aft_dis = cost - dis;
29           printf("The payment after discount is:%f\n",pay_aft_dis);
30       }
31       else if(cost >= 6000)
32       {
33           printf("The cost is:%f\n",cost);
34           dis = cost * 0.35;
35           printf("The discount is:%f\n",dis);
36           pay_aft_dis = cost - dis;
37           printf("The payment after discount is:%f\n",pay_aft_dis);
38       }
39       else if(cost <= 0)
40       {
41           printf("Invalid input");
42       }
43       else {
44           printf("There is no discount\nTHANK YOU!");
45       }
46       return 0;
47   }
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS   SEARCH ERROR

```
PS C:\UNI ASSIGNMENT\pflab\lab4> .\lab4q4
Enter the cost: 3000
The cost is:3000.000000
The discount is:300.000000
The payment after discount is:2700.000000
PS C:\UNI ASSIGNMENT\pflab\lab4>
```

QNO.3 Write a C program to input a character from the user and check whether the given character is a small alphabet, capital alphabet, digit, or special character, using if else.

```c
PFlab > lab4 > C lab4q3.c > @ main(void)
1   #include<stdio.h>
2   int main(void)
3   {
4       char character;
5       printf("Enter the character: ");
6       scanf(" %c",&character);
7       if(character >= 65&&character <= 90)
8       {
9           printf("It is a capital alphabet");
10      }
11      else if(character >= 97&&character <= 122)
12      {
13          printf("It is a small alphabet");
14      }
15      else if((character >= 33&&character <= 47)||(character >= 58&&character <= 64)||(character >= 91&&character <= 96)||(character >= 123&&character <= 126))
16      {
17          printf("It is a special character");
18      }
19      else {
20          printf("It is a digit");
21      }
22      return 0;
23  }
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS   SEARCH ERROR

```
It is a small alphabet
PS C:\UNI ASSIGNMENT\pflab\lab4> .\lab4q3
Enter the character: A
It is a capital alphabet
PS C:\UNI ASSIGNMENT\pflab\lab4> .\lab4q3
Enter the character: ?
It is a special character
PS C:\UNI ASSIGNMENT\pflab\lab4> .\lab4q3
Enter the character: 5
It is a digit
PS C:\UNI ASSIGNMENT\pflab\lab4> 
```

QNO.2 Create a calculator asking for operator (+ or – or * or /) and operands and performs calculation according to the user input using switch statement.

```c
PFlab > lab4 > C lab4q2.c > ⊘ main(void)
1    #include<stdio.h>
2    int main(void)
3    {
4        char op;
5        float num1, num2;
6        printf("Enter the number 1 :");
7        scanf(" %f",&num1);
8        printf("Enter the number 2 :");
9        scanf(" %f",&num2);
10       printf("Enter the operator :");
11       scanf(" %c",&op);
12       switch (op) {
13           case '+':
14           printf("Sum is :%.2f",num1 + num2);
15           break;
16
17           case '-':
18           printf("Sub is :%.2f",num1 - num2);
19           break;
20
21           case '*':
22           printf("Mult is :%.2f",num1 * num2);
23           break;
24
25           case '/':
26           printf("div is :%.2f",num1 / num2);
27           break;
28
29           default:
30           printf("Invalid operator");
31       }
32       return 0;
33   }
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS   SEARCH ERROR

```
PS C:\UNI ASSIGNMENT\pflab\lab4> .\lab4q2
Enter the number 1 :4
Enter the number 2 :6
Enter the operator :+
Sum is :10.00
PS C:\UNI ASSIGNMENT\pflab\lab4> .\lab4q2
Enter the number 1 :5
Enter the number 2 :9
Enter the operator :-
Sub is :-4.00
PS C:\UNI ASSIGNMENT\pflab\lab4> .\lab4q2
Enter the number 1 :8
Enter the number 2 :6
Enter the operator :*
Mult is :48.00
PS C:\UNI ASSIGNMENT\pflab\lab4> .\lab4q2
Enter the number 1 :9
Enter the number 2 :6
Enter the operator :/
div is :1.50
PS C:\UNI ASSIGNMENT\pflab\lab4> ▊
```

QNO.1 Write a C program to check whether a number is multiple of 3 or not. If it is then print "This number is multiple of 3", otherwise print "This number is not multiple of 3".

```c
PFlab > lab4 > C lab4q1.c > ⊘ main(void)
1    #include<stdio.h>
2    int main(void)
3    {
4        int num1;
5        printf("Enter the number :");
6        scanf("%d",&num1);
7        if(num1%3==0)
8        {
9            printf("The number is multiple of 3");
10       }
11       else{
12           printf("The number is not a multiple of 3");
13       }
14       return 0;
15   }
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS   SEARCH ERROR

```
PS C:\UNI ASSIGNMENT\pflab\lab4> .\lab4q1
Enter the number :21
The number is multiple of 3
PS C:\UNI ASSIGNMENT\pflab\lab4> .\lab4q1
Enter the number :20
The number is not a multiple of 3
PS C:\UNI ASSIGNMENT\pflab\lab4>
```