


QUESTION: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".

```
#include<stdio.h>
int main(){
    int number;
    printf("enter a number:");
    scanf("%d",&number);
    if(number%3==0){
        printf("number is multiple of 3");
    }
    else{
        printf("number is not multiple of 3");
    }
    return 0;
}
```

OUTPUT:

 Select Command Prompt

```
C:\Users\studentuser\Documents>multipleof3.exe
```

```
enter a number:6
```

```
number is multiple of 3
```

```
C:\Users\studentuser\Documents>multipleof3.exe
```

```
enter a number:5
```

```
number is not multiple of 3
```

```
C:\Users\studentuser\Documents>
```

Question 2:

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

```
C: > Users > studentuser > Documents > C operation.c > main()
1  #include<stdio.h>
2  √ int main(){
3      int a,b,operation;
4      char operator;
5      printf("enter number 1:");
6      scanf("%d",&a);
7      printf("enter number 2:");
8      scanf("%d",&b);
9
10     printf("enter operator:");
11     scanf(" %c",&operator);
12
13     √ switch(operator){
14         case '+':operation=a+b;
15         printf("operation is:%d",operation);
16         break;
17         case '-':operation=a-b;
18         printf("operation is:%d",operation);
19         break;
20         case '*':operation=a*b;
21         printf("operation is:%d",operation);
22         break;
23         case '/':operation=a/b;
24         printf("operation is:%d",operation);
25         break;
26         default:printf("not a valid operator");
27
28
29     }
30     return 0;
31 }
```

OUTPUT:

```
C:\Users\studentuser\Documents>operation.exe
enter number 1:2
enter number 2:4
enter operator:+
operation is:6
C:\Users\studentuser\Documents>operation.exe
enter number 1:2
enter number 2:4
enter operator:*
operation is:8
C:\Users\studentuser\Documents>operation.exe
enter number 1:6
enter number 2:3
enter operator:-
operation is:3
C:\Users\studentuser\Documents>operation.exe
enter number 1:8
enter number 2:2
enter operator:/
operation is:4
C:\Users\studentuser\Documents>
```

QUESTION 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: > Users > studentuser > Desktop > character.c > main()
1  #include<stdio.h>
2  int main()
3  {
4      char ch;
5      printf("enter a character");
6      scanf(" %c",&ch);
7
8      if(ch>=32 && ch<=47 || ch>=58 && ch<=64 ||ch>=91 && ch<=96 ||ch>=123 && ch<=126 )
9      {
10         printf("special character");
11     }
12     else if(ch>=65 && ch<=90)
13     {
14         printf("capital alphabet");
15     }
16     else if(ch>=97 && ch<=122)
17     {
18         printf("small alphabet");
19     }
20     else if(ch>=48 && ch<=57)
21     {
22         printf("digit");
23     }
24     return 0;
25 }
```

OUTPUT:

```
C:\Users\studentuser\Desktop>character.exe
enter a character8
digit
C:\Users\studentuser\Desktop>character.exe
enter a characterA
capital alphabet
C:\Users\studentuser\Desktop>CHARACTER.EXE
enter a charactera
small alphabet
C:\Users\studentuser\Desktop>character.exe
enter a character*
special character
C:\Users\studentuser\Desktop>
```

QUESTION 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 is 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.

```
> Users > studentuser > Desktop > discount.c > main()
1
2     #include<stdio.h>
3     int main(){
4         int cost,savedamount,amountafterdiscount;
5         printf("enter cost");
6         scanf("%d",&cost);
7
8         if(cost<=2000){
9             savedamount=cost*5/100;
10        }
11        else if(cost>=2000 && cost<=4000){
12            savedamount=cost*10/100;
13        }
14        else if(cost>=4000 && cost <=6000){
15            savedamount=cost*20/100;
16        }
17        else if(cost>=6000){
18            savedamount=cost*35/100;
19        }
20        amountafterdiscount=cost-savedamount;
21        printf("actual amount is:%d\n",cost);
22        printf("saved amount is: %d\n",savedamount);
23        printf("amount afterdiscount is:%d\n",amountafterdiscount);
24
25        return 0;
26    }
```

OUTPUT:

```
C:\Users\studentuser\Desktop>gcc discount.c -o discount.exe
```

```
C:\Users\studentuser\Desktop>discount.exe
```

```
enter cost2500
```

```
actual amount is:2500
```

```
saved amount is: 250
```

```
amount afterdiscount is:2250
```

```
C:\Users\studentuser\Desktop>
```


QUESTION 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: > Users > HP > C bill.c > main()

```
1  #include<stdio.h>
2  int main(){
3      int customerid;
4      float unitsconsumed,chargeunit,amountcharges,surchargeamount=0,netamount;
5
6      printf("enter costumer id");
7      scanf("%d",&customerid);
8      printf("enter units consumed");
9      scanf("%f",&unitsconsumed);
10
11     if(unitsconsumed<=199){
12         chargeunit=16.20;
13     }
14     else if(unitsconsumed>=200 && unitsconsumed<=300){
15         chargeunit=20.10;
16     }
17     else if(unitsconsumed>=300 && unitsconsumed<=500){
18         chargeunit=27.10;
19     }
20     else if(unitsconsumed>=500){
21         chargeunit=35.90;
22     }
23     amountcharges=unitsconsumed*chargeunit;
24     if(amountcharges>18000){
25         surchargeamount=amountcharges*15/100;
26     }
27     netamount=amountcharges+surchargeamount;
28     printf("customer id is:%d\n",customerid);
29     printf("units consumed are:%.2f\n",unitsconsumed);
30     printf("amount charges are:%.2f\n",amountcharges);
31     printf("surcharge amount is:%.2f\n",surchargeamount);
32     printf("net amount is:%.2f\n",netamount);
33     return 0;
34 }
35
```

OUTPUT:

```
C:\Users\HP>gcc bill.c -o bill.exe
```

```
C:\Users\HP>bill.exe
enter costumer id1234
enter units consumed546.0
customer id is:1234
units consumed are:546.00
amount charges are:19601.40
surcharge amount is:2940.21
net amount is:22541.61
```

```
C:\Users\HP>bill.exe
enter costumer id1234
enter units consumed356.2
customer id is:1234
units consumed are:356.20
amount charges are:9653.02
surcharge amount is:0.00
net amount is:9653.02
```

```
C:\Users\HP>
```

QUESTION 6:

Given a positive integer denoting n , do the following:

- a. If $1 \leq n \leq 9$, print lowercase English words corresponding to the numbers e.g. (one for 1, two for 2)
- b. If $n > 9$ print greater than 9.

```
: > Users > HP > switch.c > main()
1  #include<stdio.h>
2  int main()
3  {
4      int n;
5      printf("enter a positive integer:");
6      scanf("%d",&n);
7
8      switch(n)
9      {
10         case 1:printf("one");
11             break;
12         case 2:printf("two");
13             break;
14         case 3:printf("three");
15             break;
16         case 4:printf("four");
17             break;
18         case 5:printf("five");
19             break;
20         case 6:printf("six");
21             break;
22         case 7:printf("seven");
23             break;
24         case 8:printf("eight");
25             break;
26         case 9:printf("nine");
27             break;
28         default:printf("greater than 9");
29     }
30     return 0;
31 }
32
33
```

OUTPUT:

```
C:\Users\HP>switch.exe
enter a positive integer:5
five
C:\Users\HP>switch.exe
enter a positive integer:11
greater than 9
C:\Users\HP>
```