

# GLA UNIVERSITY MATHURA



SESSION - 2023

## **PRACTICAL FILE** **COMPUTER PROGRAMMING**

**BCSG-0002**

**SECTION - AU**

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## Q1.WAP to check number is Armstrong or not?

```
#include <stdio.h>
#include <math.h>
int main() {
    int num, org, rem, result = 0, a = 0;
    printf("Enter an integer: ");
    scanf("%d", &num);
    org = num;
    /*while (org != 0) {
        org /= 10;
        a++;
    }*/
    int temp = num ,sum = 0;
    while (num > 0) {
        rem = num % 10;
        sum = sum + pow(rem, a);
        num /= 10;
    }
    if (sum == temp) {
        printf("%d is an Armstrong number.\n", sum);
    } else {
        printf("%d is not an Armstrong number.\n",sum);
    }
    return 0;
}
```

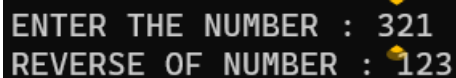
## OUTPUT-

```
Enter an integer: 12
2 is not an Armstrong number.

-----
Process exited after 3.104 seconds with return value
Press any key to continue . . . |
```

## Q2.WAP to print REVERSE of a number?

```
#include <stdio.h>
int main() {
    int n,rev=0,r;
    printf("ENTER THE NUMBER : ");
    scanf("%d",&n);
    while(n!=0)
    {
        r=n%10;
        rev=(rev*10+r);
        n=n/10;
    }
    printf("REVERSE OF NUMBER : ");
    printf("%d",rev);
}
```

A screenshot of a terminal window showing the output of the program. It displays 'ENTER THE NUMBER : 321' and 'REVERSE OF NUMBER : 123' on two lines, with a dashed line below the second line.

```
ENTER THE NUMBER : 321
REVERSE OF NUMBER : 123
-----
```

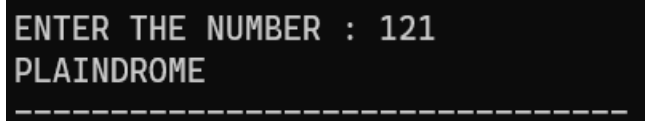
## Q3.WAP to check number is Palindrome or not?

```
#include <stdio.h>
int main() {
    int n,rev=0,r,org;
    printf("ENTER THE NUMBER : ");
    scanf("%d",&n);
    org=n;
    while(n!=0)
    {
        r=n%10;
        rev=(rev*10+r);
```

```

        n=n/10;
    }
    if (rev==org)
        printf("PLAINDROME");
    else
        printf("NOT PLAINDROME");
}

```



```

ENTER THE NUMBER : 121
PLAINDROME
-----

```

#### Q4.WAP to check number is Perfect or not?

```
#include <stdio.h>
```

```

int main() {
    int num, sum = 0;

    // Input a number from the user
    printf("Enter a positive integer: ");
    scanf("%d", &num);

    // Find the sum of proper divisors
    for (int i = 1; i < num; i++) {
        if (num % i == 0) {
            sum += i;
        }
    }

    // Check if the number is a perfect number
    if (sum == num) {

```

```

        printf("%d is a perfect number.\n", num);
    } else {
        printf("%d is not a perfect number.\n", num);
    }

    return 0;
}

```

```

Enter a positive integer: 147
147 is not a perfect number.

```

### Q5.WAP to print a Calender of a month?

```

#include <stdio.h>
#include <string.h>
#include <math.h>
int main()
{
    printf("\n30 DAY CALENDER OF A MONTH\n\n");
    int c=1;
    int n=1;
    for (int i = 1; i <= n; i++)
    {
        for (int j = 1; j <= 7; j++) {

            if(j==1)
                printf("S\t");
            if(j==2)
                printf("M\t");
            if(j==3)
                printf("Tu\t");
            if(j==4)

```

```

        printf("W\t");
        if(j==5)
            printf("Th\t");
        if(j==6)
            printf("F\t");
        if(j==7)
            printf("S\t");
    }
}
printf("\n\n");

c=1;
n=5;
for (int i = 1; i <= n; i++)
{
    for (int j = 1; j <= 7; j++) {
        if(c<=30)
        {
            printf("%d\t",c);

            c++;
        }
    }
    printf("\n");
}

return 0;
}

```

30 DAY CALENDER OF A MONTH

| S  | M  | Tu | W  | Th | F  | S  |
|----|----|----|----|----|----|----|
| 1  | 2  | 3  | 4  | 5  | 6  | 7  |
| 8  | 9  | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 29 | 30 |    |    |    |    |    |

### Q6.WAP to count the digits of Number?

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    int a;
```

```
    printf("ENTER THE NUMBER : ");
```

```
    scanf("%d",&a);
```

```
    if (a%2==0)
```

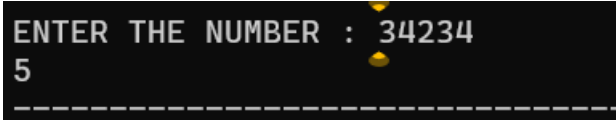
```
        printf("NUMBER IS EVEN");
```

```
    else
```

```
        printf("NUMBER IS ODD");
```

```
    return 0;
```

```
}
```



```
ENTER THE NUMBER : 34234
5
```

### Q7.WAP to Check Number is even or odd?

```
#include <stdio.h>
```

```
#include <string.h>
```

```
#include <math.h>
```

```
int main()
```

```
{
```

```
    int a;
```

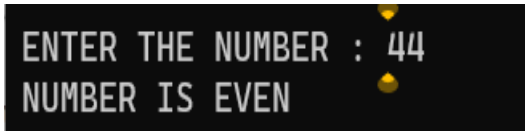
```
    printf("ENTER THE NUMBER : ");
```

```
    scanf("%d",&a);
```

```
    (a/2==0)?printf("NUMBER IS  
EVEN"):printf("NUMBER IS ODD");
```

```
    return 0;
```

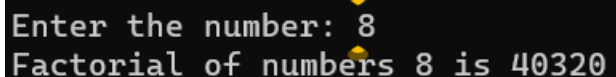
```
}
```



```
ENTER THE NUMBER : 44
NUMBER IS EVEN
```

### Q8.WAP to find factorial of a Number?

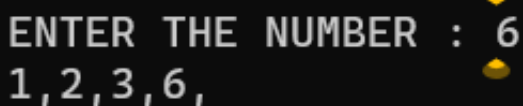
```
#include <stdio.h>
int main() {
    int n,fact=1;
    printf("Enter the number: ");
    scanf("%d", &n);
    for(int i=n;i>0;i--)
    {
        fact=fact*i;
    }
    printf("Factorial of numbers %d is %d",n,fact);
    return 0;
}
```

A screenshot of a terminal window showing the output of the C program for Q8. It displays "Enter the number: 8" followed by "Factorial of numbers 8 is 40320" on the next line, with a dashed line below it.

```
Enter the number: 8
Factorial of numbers 8 is 40320
-----
```

### Q9..WAP to find factors of a Number?

```
#include <stdio.h>
int main() {
    int n,count=0;
    printf("ENTER THE NUMBER : ");
    scanf("%d",&n);
    for(int i=1; i<=n ;i++)
    {
        if(n%i==0)
            printf("%d,",i);
    }
}
```

A screenshot of a terminal window showing the output of the C program for Q9. It displays "ENTER THE NUMBER : 6" followed by "1,2,3,6," on the next line, with a dashed line below it.

```
ENTER THE NUMBER : 6
1,2,3,6,
-----
```



### Q10.WAP to print Fibonacci Series?

```
#include <stdio.h>
```

```
int main() {
```

```
    int n, a=0, b=1, fb;
```

```
    printf("Enter the number of terms: ");
```

```
    scanf("%d", &n);
```

```
    printf("Fibonacci Series: ");
```

```
    for(int i=1 ; i<=n ; i++)
```

```
    {
```

```
        printf(" %d ", a);
```

```
        fb = a + b;
```

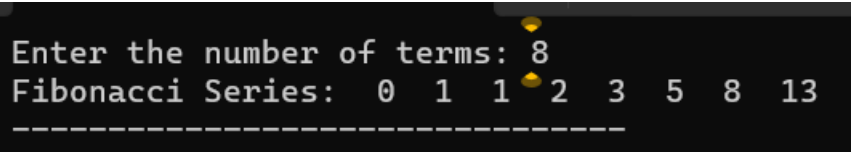
```
        a = b;
```

```
        b = fb;
```

```
    }
```

```
    return 0;
```

```
}
```



```
Enter the number of terms: 8
Fibonacci Series: 0 1 1 2 3 5 8 13
-----
```

### Q11.WAP to check number is Positive or not?

```
#include <stdio.h>
```

```
#include <string.h>
```

```
#include <math.h>
```

```
int main()
```

```
{
```

```
    int a;
```

```
    printf("ENTER THE NUMBER : ");
```

```
    scanf("%d",&a);
```

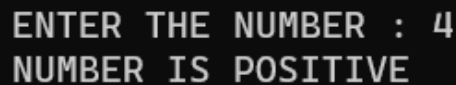
```
    if (a==0)
```

```

    printf("NUMBER IS ZERO");
    else
    {
        (a<0)?printf("NUMBER IS
NEGATIVE"):printf("NUMBER IS POSITIVE");
    }

    return 0;
}

```



```

ENTER THE NUMBER : 4
NUMBER IS POSITIVE
-----

```

## Q12.WAP to print greatest among the Series of numbers?

```

#include<stdio.h>
int main()
{
    int n,a,b=0;
    printf("Enter the number of enteries: ");
    scanf("%d",&n);
    for (int i=1;i<=n;i++)
    {
        printf("Enter %d number: ",i );
        scanf("%d",&a);
        if(b<=a)
        {    b=a;}
        else
        {    b=b;    }
    }
    printf("The greatest number is: %d",b);
}

```

```
    return 0;
}
```

### **Q13.WAP to print HCF of two numbers?**

```
#include <stdio.h>
int main() {
    int n1,n2,hcf;
    printf("This gives the H.C.F of 2 numbers \n");
    printf("Enter two integer: ");
    scanf("%d%d",&n1,&n2);
    for(int i=1;i<=n1 && i<=n2;i++)
    {
        if(n1%i==0 && n2%i==0){
            hcf=i;
        }
    }
    printf("G.C.D of %d and %d is : %d",n1,n2,hcf);
    return 0;
}
```

### **Q14.WAP to print LCM of two numbers?**

```
#include <stdio.h>
int main()
{
    int a=1,n1,n2, max;
    printf("Enter n1 and n2 :");
    scanf("%d%d", &n1,&n2);
    max= (n1>n2) ? n1:n2;
```

```

while (1)
{
    if((max%n1==0) && (max%n2==0))
    {
        printf("The LCM of %d and %d is
:%d", n1, n2, max);
        break;
    }
    max=max+1;
}
return 0;
}

```

### **Q15.WAP to print list of prime number up to 100?**

```

#include <stdio.h>
#include <string.h>
#include <math.h>
int main()
{
    int i,n,count,st=1,end=100;
    for (n=st; n <= end; n++)
    {
        count=0;
        for (int i = 2; i <= n/2; i++)
        {
            if(n%i==0){
                count++;
                break;
            }
        }
    }
}

```

```

        }
    }
    if(count==0 && n!=1) {
        printf("%d ",n);
    }
}
return 0;
}

```

```

2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97
-----

```

### Q16.WAP to print number in Exponential,OCTAL and Hexadecimal?

```

#include <stdio.h>
#include <math.h>
int main()
{
    int a;
    printf("ENTER THE NUMBER : ");
    scanf("%d",&a);
    printf("THE NUMBER IN OCTAL\t\t: %o\n",a);
    printf("THE NUMBER IN HEXADECIMAL\t:
%X\n",a);
    printf("THE NUMBER IN EXPONENTIAL\t:
%e",a);
    return 0;
}

```

### Q18.WAP to print the SIZE of different DATA TYPES?

```

#include <stdio.h>
#include <string.h>
#include <math.h>
int main()
{
    printf("THE SIZE OF DATATYPES: \n");
    printf("INT    : %d\n",sizeof(int));
    printf("FLOAT    : %d\n",sizeof(float));
    printf("DOUBLE   : %d\n",sizeof(double));
    printf("LONG    : %d\n",sizeof(long));
    printf("CHAR    : %d\n",sizeof(char));
    printf("SIGNED   : %d\n",sizeof(signed));
    printf("UNSIGNED: %d\n",sizeof(unsigned));
    printf("SHORT    : %d\n",sizeof(short));
    return 0;
}

```

```

THE SIZE OF DATATYPES:
INT      : 4
FLOAT    : 4
DOUBLE   : 8
LONG     : 4
CHAR     : 1
SIGNED   : 4
UNSIGNED : 4
SHORT    : 2
-----

```

### Q19.WAP to print prime factors of a number?

```

#include <stdio.h>
int main() {
    int n;
    printf("Enter a positive integer: ");
    scanf("%d", &n);
    printf("Prime factors of %d are: ", n);
    //18
    int i = 2;
    while(i <= n)
    {

```

```

        if (n % i == 0)
        {
            printf("%d ", i);
            n = n / i;
        } else
        {
            i++;
        }
    }
    return 0;
}

```

```

Enter a positive integer: 55
Prime factors of 55 are: 5 11
-----

```

## Q20.WAP to check the number is prime or not?

```
#include <stdio.h>
```

```

int main() {
    int num, count = 0;
    printf("Enter a positive integer: ");
    scanf("%d", &num);
    for (int i = 1; i <= num; i++) {
        if (num % i == 0) {
            count++;
        }
    }
    if (count == 2) {
        printf("%d is prime", num);
    } else {
        printf("%d is not prime", num);
    }
    return 0;
}

```

```

Enter a positive integer: 59
59 is prime
-----

```

```

Enter a positive integer: 77
77 is not prime
-----

```

```
}
```

**Q21. Write a program to print the following patterns:**

**Ans.(a)**

```
//ALL Triangle Pattern
```

```
#include <stdio.h>
```

```
#include <string.h>
```

```
#include <math.h>
```

```
int main()
```

```
{
```

```
printf("Right Angle triangle");
```

```
printf("\n\n");
```

```
int n=4;
```

```
for (int i = 1; i <= n; i++)
```

```
{
```

```
for (int j = 1; j <= i; j++) {
```

```
printf("* ");
```

```
}
```

```
printf("\n");
```

```
}
```

```
printf("\n\n");
```

```
printf("VERTICALLY SYMETRICAL TRIANGLE");
```

```
printf("\n\n");
```

```
n=4;
```

```
for (int i=n; i >= 1; i--)
```

```
{
```

```
for (int j = 1; j <= i; j++) {
```

```
printf("* ");
```

```
}
```

Right Angle triangle

```
*
* *
* * *
* * * *
```

VERTICALLY SYMETRICAL TRIANGLE

```
* * * *
* * *
* *
*
```

MIRROR RIGHT ANGLED TRIANGLE

```
      *
     * *
    * * *
   * * * *
```

VERTICALLY SYMETRICAL OF MIRROR TRIANGLE

```
* * * *
 * * *
  * *
   *
```



```

        printf("\n");
    }
    printf("\n\n");
    printf("MIRROR RIGHT ANGLED TRIANGLE");
    printf("\n\n");
    n=4;
    for (int i = 1; i <= n; i++)
    {
        for (int k = n; k >i; k--)
        {
            printf(" ");
        }
        for (int j = 1; j <= i; j++)
        {
            printf("* ");
        }
        printf("\n");
    }
    printf("\n\n");
    printf("VERTICALLY SYMETRICAL OF MIRROR TRIANGLE");
    printf("\n\n");
    n=4;
    for (int i = n; i >= 1; i--)
    {
        for (int k = n; k >i; k--)
        {
            printf(" ");
        }
    }

```

```

    }
    for (int j = 1; j <= i; j++)
        {
            printf("* ");
        }
    printf("\n");
}
printf("\n\n");

```

```

    return 0;
}

```

**(b)**

```

#include <stdio.h>
#include <string.h>
#include <math.h>
int main()
{
    printf("Right Angle triangle 1,2,3,4 by rows");
    printf("\n\n");
    int n=4;
    for (int i = 1; i <= n; i++)
    {
        for (int j = 1; j <= i; j++) {
            printf("%d ",i);
        }
        printf("\n");
    }
    printf("\nRight Angle triangle 1,2,3,4 by columns");
}

```

```

printf("\n\n");
    n=4;
    for (int i = 1; i <= n; i++)
    {
        for (int j = 1; j <= i; j++) {
            printf("%d ",j);
        }
        printf("\n");
    }
    return 0;
}

```

Right Angle triangle 1,2,3,4 by rows

```

1
2 2
3 3 3
4 4 4 4

```

Right Angle triangle 1,2,3,4 by columns

```

1
1 2
1 2 3
1 2 3 4

```

**(c)**

```

#include <stdio.h>
#include <string.h>
#include <math.h>
int main()
{
    printf("ABCD SQUARE by rows");
    printf("\n\n");
    char n='D';
    for (char i = 'A'; i <= n; i++)
    {
        for (int j = 'A'; j <= n; j++) {
            printf("%c ",i);
        }
        printf("\n");
    }
    printf("\nABCD SQUARE by columns");
}

```

```

printf("\n\n");
    n='D';
    for (char i = 'A'; i <= n; i++)
    {
        for (int j = 'A'; j <= n; j++) {
            printf("%c ",j);
        }
        printf("\n");
    }
printf("\nABCD TRIANGLE by rows");
printf("\n\n");
    n='D';
    for (char i = 'A'; i <= n; i++)
    {
        for (int j = 'A'; j <= i; j++) {
            printf("%c ",i);
        }
        printf("\n");
    }
printf("\nABCD TRIANGLE by columns");
printf("\n\n");
    n='D';
    for (char i = 'A'; i <= n; i++)
    {
        for (int j = 'A'; j <= i; j++) {
            printf("%c ",j);
        }
        printf("\n");
    }

```

```

A A A A
B B B B
C C C C
D D D D

```

ABCD SQUARE by columns

```

A B C D
A B C D
A B C D
A B C D

```

ABCD TRIANGLE by rows

```

A
B B
C C C
D D D D

```

ABCD TRIANGLE by columns

```

A
A B
A B C
A B C D

```

```

    }

    return 0;
}
(d)
#include <stdio.h>
#include <string.h>
#include <math.h>
int main()
{
    printf("1-0 PATTERN ");
    printf("\n\n");
    int n=3;
    for (int i = 1; i <= n; i++)
    {
        for (int j = 1; j <= n; j++) {
            if (i==j)
                printf("1 ");
            else
                printf("0 ");
        }
        printf("\n");
    }
}

```

```

printf("\nA to Y SQUARE by count increamnet");
printf("\n\n");
char count='A';

```

```

1-0 PATTERN

1 0 0
0 1 0
0 0 1

A to Y SQUARE by count increamnet

A B C D E
F G H I J
K L M N O
P Q R S T
U V W X Y

1 to 25 SQUARE by count increamnet

12345
678910
1112131415
1617181920
2122232425

A to U Triangle by count increamnet

A
B C
D E F
G H I J
K L M N O
P Q R S T U

```

```

    n='E';
    for (char i = 'A'; i <= n; i++)
    {
        for (char j = 'A'; j <= n; j++) {
            printf("%c ",count);
            count++;
        }
        printf("\n");
    }
printf("\n1 to 25 SQUARE by count increament");
printf("\n\n");
    int c=1;
    n=5;
    for (int i = 1; i <= n; i++)
    {
        for (int j = 1; j <= n; j++) {
            printf("%d",c);
            c++;
        }
        printf("\n");
    }
printf("\nA to U Triangle by count increament");
printf("\n\n");
    count='A';
    n='F';
    for (char i = 'A'; i <= n; i++)
    {
        for (char j = 'A'; j <= i; j++) {

```

```

        printf("%c ",count);
        count++;
    }
    printf("\n");
}
return 0;
}

```

## Q26. QUIZ SYSTEM -

```

//
    NAME- ABHAY VERMA
//
    SECTION -AU-1
//
CS23

```

BTECH

```

#include <stdio.h>
#include <string.h>
#include <time.h>
#include <unistd.h>
int ch()
{
    int choice;
    printf("CHOICE ANY ONE :");
    scanf(" %d",&choice);
    return choice;
}
int main()
{

```

```

printf("-----\n
WELCOME IN ONLINE QUIZ PORTAL  \n-----
-----\n");
start:
char a;
int marks=0,p1=0,p2=0,p3=0,p4=0,p5=0;
char name[10], branch[10];
printf("ENTER YOUR NAME: ");
scanf("%s", name);
printf("ENTER YOUR BRANCH: ");
scanf("%s", branch);
while(1){
printf("\nDO YOU WANT TO START THE QUIZ (Y/N) : ");
scanf(" %c",&a);
    if (a=='Y' || a=='y')
    {
        printf("\n-----
\nNOTE: PER QUESTION 10 SECONDS\nCORRECT
ANSWER = 1 MARKS \nWRONG ANSWER = 0
MARKS\nNOTE: ALL QUESTIONS ARE MENDATORY\n----
-----\n\n");
//Q1
        printf("Q1.Which of the following is not a valid
data type in C?\n1) FLOAT\n2) INT\n3) DOUBLE\n4)
TRIPLE\n\n");
        int differ;
        int s, e;
        s = time("\0");

```



```

        port1:
        int q1=ch();
        if (q1==4)
        {
            p1++;
        }
        if(q1>4 || q1==0 )
        {
            printf("WRONG OPTION CHOICE !!\n");
            goto port1;
        }
        e = time('\0');
        differ = e-s;
        if(differ<=10)
        {
            printf("Time taken : %d seconds\n\n",
differ);
        }
        else
        {
            printf("YOU TAKE OVER TIME!!!\n\n");
            p1=0;
        }

//Q2
        printf("Q2.Which Keyword is used to exit a
loop prematurely?\n1) Break \n2) Exit \n3) Stop\n4)
Last\n\n");
        differ;

```

```

s, e;
s = time('\0');
    port2:
    int q2=ch();
    if (q2==1)
    {
        p2++;
    }
    if(q2>4 || q2==0)
    {
        printf("WRONG OPTION CHOICE !!\n");
        goto port2;
    }
    e = time('\0');
differ = e-s;
if(differ<=10)
{
    printf("Time taken : %d seconds\n\n",
differ);
}
else
{
    printf("YOU TAKE OVER TIME!!!\n\n");
    p2=0;
}

//Q3

```

```
printf("Q3.Which of the following is a valid  
way to comment out a single line in C?\n1) /\n2) /*  
*\n3) --\n4) # \n\n");
```

```
    differ;
```

```
    s, e;
```

```
    s = time('\0');
```

```
    port3:
```

```
    int q3=ch();
```

```
    if (q3==1)
```

```
    {
```

```
        p3++;
```

```
    }
```

```
    if(q3>4 || q3==0)
```

```
    {
```

```
        printf("WRONG OPTION CHOICE !!\n");
```

```
        goto port3;
```

```
    }
```

```
    e = time('\0');
```

```
    differ = e-s;
```

```
    if(differ<=10)
```

```
    {
```

```
        printf("Time taken : %d seconds\n\n",
```

```
differ);
```

```
    }
```

```
    else
```

```
    {
```

```
        printf("YOU TAKE OVER TIME!!!\n\n");
```

```

        p3=0;
    }

//Q4
    printf("Q4.Which library should be included
for handling strings in C?\n1) math.h\n2) string.h\n3)
stdio.h\n4) stdlib.h\n\n");
    differ;
s, e;
s = time('\0');
    port4:
    int q4=ch();
    if (q4==2 )
    {
        p4++;
    }
    if(q4>4 || q4==0)
    {
        printf("WRONG OPTION CHOICE !!\n");
        goto port4;
    }
    e = time('\0');
    differ = e-s;
    if(differ<=10)
    {
        printf("Time taken : %d seconds\n\n",
differ);
    }
    else

```

```

        {
        printf("YOU TAKE OVER TIME!!!\n\n");
        p4=0;
        }

//Q5
        printf("Q5.Which of the Loop that executes at
least once?\n1) While\n2) For\n3) Do-while\n4)
Switch\n\n");
        differ;
        s, e;
        s = time('\0');
        port5:
        int q5=ch();
        if (q5==3)
        {
                p5++;
        }
        else if(q5>4 || q5==0)
        {
                printf("WRONG OPTION CHOICE !!\n");
                goto port5;
        }
        e = time('\0');
        differ = e-s;
        if(differ<=10)
        {
                printf("Time taken : %d seconds\n\n",
differ);

```

```
    }
    else
    {
        printf("YOU TAKE OVER TIME!!!\n\n");
        p5=0;
    }
//RESULT
    marks=p1+p2+p3+p4+p5;
    char g;
    if (marks==5)
    {
        g='A';
    }
    else if (marks==4)
    {
        g='B';
    }
    else if (marks==3)
    {
        g='C';
    }
    else if (marks==2)
    {
        g='D';
    }
    else if (marks==1)
    {
        g='E';
    }
```

```

    }
    else
    {
        g='F';
    }
    printf("\n-----
\n YOUR RESULT : %s\n-----
-----\n",name);
    printf("MARKS OBTAIN: %d \nMARKS TOTAL :
5\n",marks);
    printf("YOUR GRADES : %c\n",g);
    step:
    char k;
    printf("\nDO YOU WANT FOR ANOTHER
RESPONSE (Y/N) : ");
    scanf(" %c",&k);
    if (k=='Y' || k=='y')
    {
        goto start;
    }
    else if(k=='N' || k=='n')
    {
        break;
    }
    else
    {
        printf("\nINVALID CHOICE! YOU CHOICE
WRONG\n");
    }

```

```

        goto step;
    }

}
else if(a=='N' || a=='n')
{
    break;
}
else
{
    printf("\nINVALID CHOICE! YOU CHOICE
WRONG\n");
    goto start;
}

}

printf("\n*****THANKS FOR VISIT IN
ONLINE QUIZ PORTAL*****\n
----BY ABHAY VERMA-----\n\n");
return 0;
}

```



# OUTPUT

```
-----
                                WELCOME IN ONLINE QUIZ PORTAL
-----

ENTER YOUR NAME: ABHAY
ENTER YOUR BRANCH: CS

DO YOU WANT TO START THE QUIZ (Y/N) : Y

-----

NOTE: PER QUESTION 10 SECONDS
CORRECT ANSWER = 1 MARKS
WRONG ANSWER = 0 MARKS
NOTE: ALL QUESTIONS ARE MENDATORY
-----

Q1.Which of the following is not a valid data type in C?
1) FLOAT
2) INT
3) DOUBLE
4) TRIPLE

CHOICE ANY ONE :4
Time taken : 8 seconds

Q2.Which Keyword is used to exit a loop prematurely?
1) Break
2) Exit
3) Stop
4) Last

CHOICE ANY ONE :1
Time taken : 3 seconds

Q3.Which of the following is a valid way to comment out a single line in C?
1) //
2) /* */
3) --
4) #

CHOICE ANY ONE :1
Time taken : 3 seconds

Q4.Which library should be included for handling strings in C?
1) math.h
2) string.h
3) stdio.h
4) stdlib.h

CHOICE ANY ONE :2
YOU TAKE OVER TIME!!!

Q5.Which of the Loop that executes at least once?
1) While
2) For
3) Do-while
4) Switch

CHOICE ANY ONE :5
WRONG OPTION CHOICE !!
CHOICE ANY ONE :3
Time taken : 6 seconds

-----

YOUR RESULT : ABHAY
-----

MARKS OBTAIN: 4
MARKS TOTAL : 5
YOUR GRADES : B

DO YOU WANT FOR ANOTHER RESPONSE (Y/N) : N

*****THANKS FOR VISIT IN ONLINE QUIZ PORTAL*****
-----BY ABHAY VERMA-----
```

## Q27. ONLINE VOTING PORTAL

```
//  
    NAME- ABHAY VERMA  
//  
    SECTION -AU-1  
//  
CS23  
#include<stdio.h>  
#include <conio.h>  
#include <string.h>  
int main()  
{  
    int  
ch,c,v,age,p1=0,p2=0,p3=0,p4=0,p5=0,p6=0,p7=0,p8=0;  
    char name[100];  
    char gender;  
    printf("*****WELCOME IN VOTING  
ONLINE SYSTEM BY ABHAY  
VERMA*****\n\n");  
  
    while (1)  
    {  
        start:  
        printf("1->Give Your Vote. \n2->Check Winner  
Party. \n3-> Exit.\n\n");  
        printf("Enter Your Choice: ");  
        scanf("%d",&ch);  
        if (ch==1)
```

```

{
    printf("\n-----\n");
    printf("*****Voter Personal
Details*****\n");
    printf("-----\n");
    printf("Enter Your gender (M/F) : ");
    scanf(" %c",&gender);
    printf("Enter your name: ");
    scanf("%s", name);
    printf("Enter Your Age: ");
    scanf("%d",&age);
    if (age>=18)
    {
        if(gender=='M' || gender=='m')
        {
            printf("\n-----\n");
            printf("Your Details are filled
successfully....\n");
            printf("-----\n");
            printf("Your Name : Mr. %s\n",name);
            printf("Your age : %d\n",age);

            printf("You are eligible to vote...");
        }
    }
}

```

```

else if (gender == 'F' || gender == 'f')
{
printf("\n-----
-----\n");
printf("Your Details are filled
successfully....\n");
printf("-----
-----\n");
printf("Your Name : Ms.
%s\n", name);
printf("Your age : %d\n", age);
printf("You are eligible to vote...");
}
else
{
printf("\n-----
-----\n");
printf("INVALID CHOICE ,You choice
wrong...\n");
printf("-----
-----\n");
goto start;
}
else
{
printf("\n-----
-----\n");

```

```

        printf("Sorry! %s, you are not eligible
to vote.\n\n",name);
        printf("-----
-----\n");
        goto start;
    }
    printf("\n\n\n-----
-----\n");
    printf("There are 6 political parties given
below vote any one\n");
    printf(" 1-> BHARATIYA JANATA PARTY
(B.J.P) \n 2-> ALL INDIA TRINAMOOOL CONGRESS
(A.I.T.C) \n 3-> INDIAN NATIONAL CONGRESS (I.N.C)
\n");
    printf(" 4-> AAM AADMI PARTY (A.A.P) \n
5-> BAHUJAN SAMAJ PARTY (B.S.P) \n 6-> SAMAJWADI
PARTY (S.P) \n");
    printf("-----
-----\n");
    printf("ENTER YOUR VOTE: ");
    scanf("%d",&v);
    printf("\n-----
-----\n");
    if (v==1)
    {
        p1++;
    }
    else if (v==2)

```

```

        {
            p2++;
        }
    else if (v==3)
    {
        p3++;
    }
    else if (v==4)
    {
        p4++;
    }
    else if (v==5)
    {
        p5++;
    }
    else if (v==6)
    {
        p6++;
    }
    else
    {
        printf("INVALID CHOICE ,You choice
wrong...\n-----
-----\n");
        goto start;
    }
    printf("You vote sucessfully...\n");

```

```

        printf("-----\n");
    }
    else if(ch==2)
    {
        printf("-----\n");
        printf("The WINNER PARTY: ");
        if (p1>p2 && p1>p3 && p1>p4 && p1>p5
&& p1>p6)
        {
            printf(" BHARATIYA JANATA PARTY
(B.J.P)");
        }
        else if (p2>p1 && p2>p3 && p2>p4 && p2>p5
&& p2>p6)
        {
            printf(" ALL INDIA TRINAMOOOL
CONGRESS (A.I.T.C)");
        }
        else if (p3>p1 && p3>p2 && p3>p4 && p3>p5
&& p3>p6)
        {
            printf("T INDIAN NATIONAL
CONGRESS (I.N.C)");
        }
        else if (p4>p1 && p4>p2 && p4>p3 && p4>p5
&& p4>p6)

```

```

        {
            printf(" AAM AADMI PARTY (A.A.P)");
        }
    else if (p5>p1 && p5>p2 && p5>p3 && p5>p4
&& p6>p6)
        {
            printf(" BAHUJAN SAMAJ PARTY
(B.S.P)");
        }
    else if (p6>p1 && p6>p2 && p6>p3 && p6>p4
&& p6>p5)
        {
            printf(" SAMAJWADI PARTY (S.P)");
        }
    else
    {
        printf("OOPS! THERE ARE TWO OR
MORE POLITICAL PARTIES HAVING EQUAL VOTE !!!");

    }
    printf("\n-----
-----\n");
    printf("\n");
}
else if (ch==3)
{    printf("\n-----
-----\n");

```



```

                printf(" *****THANK YOU
FOR USING THIS VOTING
SYSTEM*****\n");
                printf("-----BY
ABHAY VERMA-----\n");
                break ;
            }
            else
            {
                printf("\n-----
-----\n");
                printf("INVALID CHOICE ,You choice
Wrong...\n");
                printf("-----
-----\n");
                goto start;
            }
        }
        return 0;
    }

```

## OUTPUT-

```
*****WELCOME IN VOTING ONLINE SYSTEM BY ABHAY VERMA*****

1->Give Your Vote.
2->Check Winner Party.
3-> Exit.

Enter Your Choice: 1

-----
*****Voter Personal Details*****
-----
Enter Your gender (M/F) : M
Enter your name: ABHAY
Enter Your Age: 18

-----
Your Details are filled successfully...
-----
Your Name : Mr. ABHAY
Your age: 18
You are eligible to vote...
-----

There are 6 political parties given below vote any one
1-> BHARATIYA JANATA PARTY (B.J.P)
2-> ALL INDIA TRINAMOL CONGRESS (A.I.T.C)
3-> INDIAN NATIONAL CONGRESS (I.N.C)
4-> AAM AADMI PARTY (A.A.P)
5-> BAHUJAN SAMAJ PARTY (B.S.P)
6-> SAMAJWADI PARTY (S.P)
-----
ENTER YOUR VOTE: 1

-----
You vote sucessfully...
-----
1->Give Your Vote.
2->Check Winner Party.
3-> Exit.

Enter Your Choice: 1

-----
*****Voter Personal Details*****
-----
Enter Your gender (M/F) : F
Enter your name: ASHIKA
Enter Your Age: 45

-----
Your Details are filled successfully...
-----
```

Your Name : Ms. ASHIKA  
Your age : 45  
You are eligible to vote...

-----  
There are 6 political parties given below vote any one

- 1-> BHARATIYA JANATA PARTY (B.J.P)
- 2-> ALL INDIA TRINAMOOL CONGRESS (A.I.T.C)
- 3-> INDIAN NATIONAL CONGRESS (I.N.C)
- 4-> AAM AADMI PARTY (A.A.P)
- 5-> BAHUJAN SAMAJ PARTY (B.S.P)
- 6-> SAMAJWADI PARTY (S.P)

-----  
ENTER YOUR VOTE: 1

-----  
You vote sucessfully...

- 1->Give Your Vote.  
2->Check Winner Party.  
3-> Exit.

Enter Your Choice: 1

-----  
\*\*\*\*\*Voter Personal Details\*\*\*\*\*

-----  
Enter Your gender (M/F) : G  
Enter your name: SUBH  
Enter Your Age: 44

-----  
INVALID CHOICE ,You choice wrong...

- 1->Give Your Vote.  
2->Check Winner Party.  
3-> Exit.

Enter Your Choice: 1

-----  
\*\*\*\*\*Voter Personal Details\*\*\*\*\*

-----  
Enter Your gender (M/F) : M  
Enter your name: GAURv  
Enter Your Age: 23

-----  
Your Details are filled successfully....

-----  
Your Name : Mr. GAURv  
Your age : 23

```

Your Details are filled successfully....
-----
Your Name : Mr. GAURv
Your age : 23
You are eligible to vote...

-----

There are 6 political parties given below vote any one
1-> BHARATIYA JANATA PARTY (B.J.P)
2-> ALL INDIA TRINAMOOOL CONGRESS (A.I.T.C)
3-> INDIAN NATIONAL CONGRESS (I.N.C)
4-> AAM AADMI PARTY (A.A.P)
5-> BAHUJAN SAMAJ PARTY (B.S.P)
6-> SAMAJWADI PARTY (S.P)
-----

ENTER YOUR VOTE: 3

-----

You vote sucessfully...
-----

1->Give Your Vote.
2->Check Winner Party.
3-> Exit.

Enter Your Choice: 2

-----

The WINNER PARTY:  BHARATIYA JANATA PARTY (B.J.P)
-----

1->Give Your Vote.
2->Check Winner Party.
3-> Exit.

Enter Your Choice: 3

-----

*****THANK YOU FOR USING THIS VOTING SYSTEM*****
-----BY ABHAY VERMA-----
-----

Process exited after 77.77 seconds with return value 0
Press any key to continue . . .

```

## Q28.

```
#include <stdio.h>
```

```
int main() {
```

```
    int temp;
```

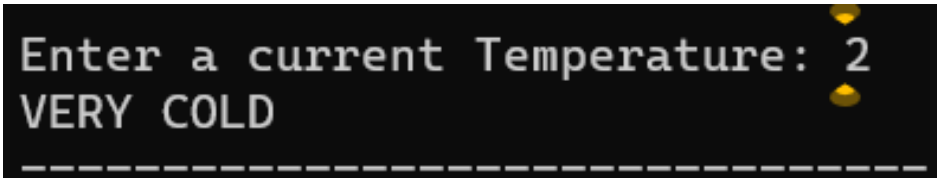
```
    printf("Enter a current Temperature: ");
```

```
    scanf("%d", &temp);
```

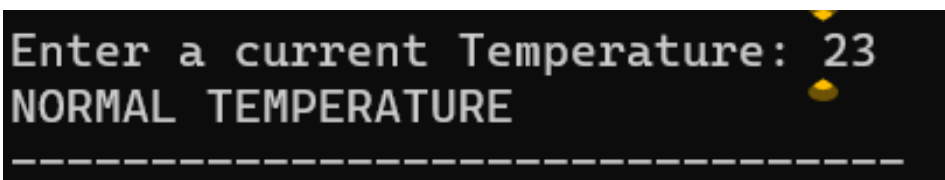
```
    if (temp<=0)
```

```
        printf("FREEZING WEATHER");
    else if(temp>0 && temp<10)
        printf("VERY COLD");
    else if(temp>=10 && temp<20)
        printf("ITS COLD");
    else if(temp>=20 && temp<30)
        printf("NORMAL TEMPERATURE");
    else if(temp>=30 && temp<40)
        printf("ITS WARM");
    else if(temp>=40 && temp<45)
        printf("TOO HOT");
    else if(temp>=45)
        printf("VERY HOT");
    else
        printf("Error: Invalid TEMPERATURE\n");

    return 0;
}
```



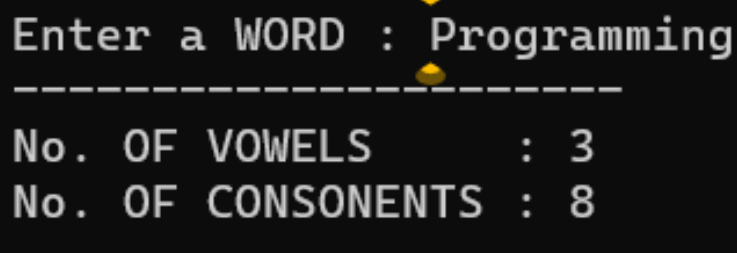
```
Enter a current Temperature: 2
VERY COLD
-----
```



```
Enter a current Temperature: 23
NORMAL TEMPERATURE
-----
```

## Q29.WAP TO COUNT THE NUMBER OF CONSONANTS AND VOWELS IN STRING?

```
#include <stdio.h>
#include <string.h>
#include <math.h>
int main()
{
    printf("Enter a WORD : ");
    char a[100];
    gets(a);
    int count=0,y=0;
    int x=strlen(a);
    for(int i=0;i<x;i++)
    {
        int vow =a[i];
        switch (vow) {
            case 'a':
            case 'e':
            case 'i':
            case 'o':
            case 'u':
            case 'A':
            case 'E':
            case 'I':
            case 'O':
            case 'U':
```



```
Enter a WORD : Programming
-----
No. OF VOWELS      : 3
No. OF CONSONENTS  : 8
-----
```

```

        count++;
        break;
    default:
        y=x-count;
    }
}
printf("-----\nNo. OF VOWELS    :
%d\nNo. OF CONSONENTS : %d\n-----
\n",count,y);
return 0;
}

```

### **Q30.WAP TO PRINT AREA OF SQUARE & VOLUME OF CUBE (with NO RETURN TYPE)**

//SUM FUNCTION

```
#include<stdio.h>
```

```
void area();
```

```
void vol();
```

```
void area()
```

```
{
```

```
    int x,a;
```

```
    printf("Enter the side of SQUARE: ");
```

```
    scanf("%d",&x);
```

```
    a=x*x;
```

```
    printf("AREA OF SQUARE : %d \n",a);
```

```
}
```

```
void vol()
```

```

{
    int x,v;
    printf("Enter the side of CUBE: ");
    scanf("%d",&x);
    v=x*x*x;
    printf("AREA OF CUBE : %d \n",v);
}
int main()
{
    area();
    vol();
}

```

```

Enter the side of SQUARE: 3
AREA OF SQUARE : 9
Enter the side of CUBE: 12
AREA OF CUBE : 1728
-----

```

### Q31.WAP TO PRINT ADD AND SUB USING FUNCTION BY PASSING THE ARGUMENT AND RETURN TYPE:

```

#include<stdio.h>
int add(int a, int b)
{
    return a+b;
}

```

```

int main()
{
    int n,m;
    printf("Enter the numbers N : ");
    scanf("%d",&n);
    printf("Enter the numbers M : ");

```

```

Enter the numbers N : 33
Enter the numbers M : 3
SUM : 36
-----
Process exited after 3.17 seconds

```



```
scanf("%d",&m);  
int x=add(n,m);  
printf("SUM : %d",x);
```

```
// power function
```

```
}
```

### Q32.SWAP THE POINTERS ?

```
#include<stdio.h>
```

```
int main()
```

```
{
```

```
    int a,b;
```

```
    printf("Enter the numbers A and B : ");
```

```
    scanf("%d%d",&a,&b);
```

```
    int *p=&a ,*q=&b;
```

```
    int temp;
```

```
    printf("BEFORE SWAPING (A=%d) and (B=%d)  
\n",*p,*q);
```

```
    temp=*p;
```

```
    *p=*q;
```

```
    *q=temp;
```

```
    printf("AFTER SWAPING (A=%d) and  
(B=%d)",*p,*q);
```

```
}
```

```
Enter the numbers A and B : 23 33  
BEFORE SWAPING (A=23) and (B=33)  
AFTER SWAPING (A=33) and (B=23)
```

### Q33.WAP TO MAKE A USER ENTERED MATRIX?

```
#include <stdio.h>
```

```
int main() {
    int rows, cols;
    printf("Enter the number of rows: ");
    scanf("%d", &rows);
    printf("Enter the number of columns: ");
    scanf("%d", &cols);
    int matrix[rows][cols];
    printf("Enter the values for the matrix:\n");
    for (int i = 0; i < rows; ++i) {
        for (int j = 0; j < cols; ++j) {
            printf("Enter element at position (%d, %d): ", i +
1, j + 1);
            scanf("%d", &matrix[i][j]);
        }
    }
    printf("Entered Matrix:\n");
    for (int i = 0; i < rows; ++i) {
        for (int j = 0; j < cols; ++j) {
            printf("%d\t", matrix[i][j]);
        }
        printf("\n\n");
    }

    return 0;
}
```

## OUTPUT-

```
Enter the number of rows: 3
Enter the number of columns: 3
Enter the values for the matrix:
Enter element at position (1, 1): 1
Enter element at position (1, 2): 0
Enter element at position (1, 3): 2
Enter element at position (2, 1): 0
Enter element at position (2, 2): 1
Enter element at position (2, 3): 0
Enter element at position (3, 1): 2
Enter element at position (3, 2): 0
Enter element at position (3, 3): 1
Entered Matrix:
1      0      2
0      1      0
2      0      1
```

### Q33.WAP TO INSERT VALUE IN ARRAY AND ALSO DELETE THE ELEMENT FROM ANY INDEX?

```
#include <stdio.h>
int main()
{
    int n;
    printf("enter the size: ");
    scanf("%d",&n);
    int a[n];
```

```

for (int i=0;i < n; i++)
{
    printf("Enter the value at index %d: ",i);
    scanf("%d",&a[i]);
}
for (int i=0;i<n;i++)
{
    printf("%d ",a[i]);
}
// delition
int pos;
printf("\nEnter the deletion index: ");
scanf("%d",&pos);
for (int i=pos;i < n; i++)
{
    a[i]=a[i+1];
}
for (int i=0;i < n-1;i++)
{
    printf("%d ",a[i]);
}
}

```

```

enter the size: 5
Enter the value at index 0: 10
Enter the value at index 1: 120
Enter the value at index 2: 30
Enter the value at index 3: 140
Enter the value at index 4: 50
10 120 30 140 50
Enter the deletion index: 2
10 120 140 50

```

Thank You