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?

```c
#include <stdio.h>
#include <math.h>
int main() {
    int num,temp, org, rem, result = 0, a = 0;
    printf("Enter an integer: ");
    scanf("%d", &num);
    org = num;
    temp=num;
    while (org != 0) {
        org /= 10;
        a++;
    }
    int 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", temp);
    } else {
        printf("%d 1is not an Armstrong number.\n",temp);
    }
    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?

```c
#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);


}
```

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

Q3.WAP to check number is Palindrome or not?

```c
#include <stdio.h> int main() {
int n,rev=0,r,org;    printf("ENTER
THE NUMBER : ");
```

```c
    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?

```c
#include <stdio.h>

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

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

```c
    // 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?

```c
#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;
```

```c
    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>
```

```c
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?

```c
#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;
}
```

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

Q9..WAP to find factors of a Number?

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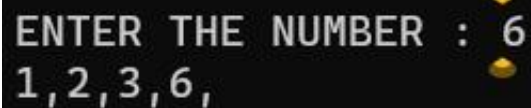
```c
    printf("ENTER THE NUMBER : ");
    scanf("%d",&n);
        for(int i=1; i<=n ;i++)
        {
        if(n%i==0)
printf("%d,",i);
        }
}
```

```
ENTER THE NUMBER : 6
1,2,3,6,
_____
```
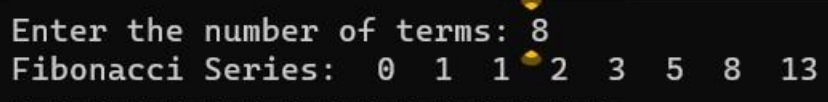
Q10.WAP to print Fibonacci Series?

```c
#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;
}
```
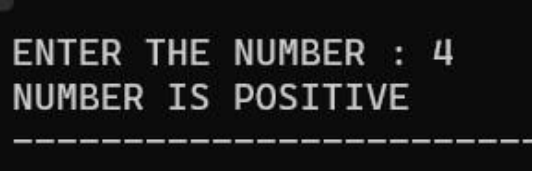
```
Enter the number of terms: 8
Fibonacci Series:  0  1  1  2  3  5  8  13
_____
```

Q11.WAP to check number is Positive or not?

```c
#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?

```c
#include<stdio.h>
int main()
    {
    int n,a,b=0;
```

```c
    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?

```c
#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;
}
    }
```

```
This gives the H.C.F of 2 numbers
Enter two integer: 11
22
G.C.D of 11 and 22 is : 11
------------------------------
```

```c
        printf("G.C.D of %d and %d is : %d",n1,n2,hcf);
        return 0;
}
```

Q14.WAP to print LCM of two numbers?

```c
#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;
}
```

```
Enter n1 and n2 :23
46
The LCM of 23 and 46 is :46
--------------------------------
```

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

#include <stdio.h>

```c
#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?

```c
#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?
```c
#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    :
```

```c
%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?

```c
#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++;
      }
```

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

```
        }
    return 0;
}
```

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)

```c
//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("* ");
    }
    printf("\n");
  }
```

```
Right Angle triangle

*
* *
* * *
* * * *


VERTICALLY SYMETRICAL TRIANGLE

* * * *
* * *
* *
*


MIRROR RIGHT ANGLED TRIANGLE

         *
      * *
   * * *
* * * *


VERTICALLY SYMETRICAL OF MIRROR TRIANGLE

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

```c
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++)
        {
```

```c
        printf("* ");
      }
      printf("\n");
    }
printf("\n\n");


    return 0;
}
```

(b)

```c
#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");
```

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

(c)
```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");
```

```c
        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);
```

```
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
_____
```

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

    return 0;
}
```

(d)

```c
#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");
    }
```

```
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
```

```c
printf("\nA to Y SQUARE by count increamnet");
printf("\n\n"); char count='A';
    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 increamnet");
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 increamnet");
printf("\n\n");     count='A';
    n='F';
    for (char i = 'A'; i <= n; i++)
```

```c
        {
        for (char j = 'A'; j <= i; j++) {
            printf("%c ",count);
count++;
        }
        printf("\n");
    }
    return 0;
}
```

Q26.QUIZ SYSTEM -
```c
//
    NAME- ABHAY VERMA
//
    SECTION -AU-1
//                                          BTECH
CS23
#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;
```

```c
}
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;
```

```c
    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;
        }
```

```c
//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
          {
```

```c
        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)
        {
```

```c
            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');
```

```c
        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;
```

```c
            }
            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)
            {
```

```c
            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;
```

```c
          }
          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

```c
//
    NAME- ABHAY VERMA
//
    SECTION -AU-1
//                                                      BTECH
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
```

```c
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("-----------------------------------------
```

```c
                        -------------------------------------\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");
```

```c
                    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 TRINAMOOL 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");
```

```c
        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++;
```

```c
            }
            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
```

```c
(B.J.P)");
                }
            else if (p2>p1 && p2>p3 && p2>p4 && p2>p5
&& p2>p6)
                {

                printf(" ALL INDIA TRINAMOOL
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
```

```c
(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 ;
```

```c
            }
        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 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) : 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
```

44

```
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 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: 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. WAP TO PRINT THE DETAILS OF TEMPERATURE ?

#include <stdio.h>
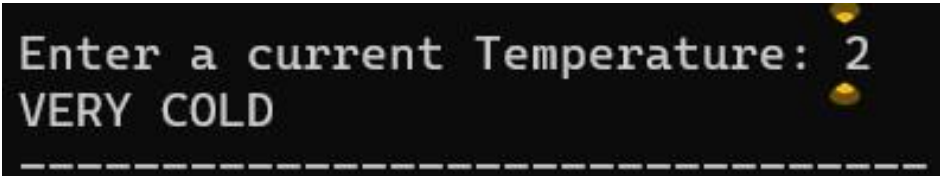
int main() {   int
temp;
    printf("Enter a current Temperature: ");
scanf("%d", &temp);
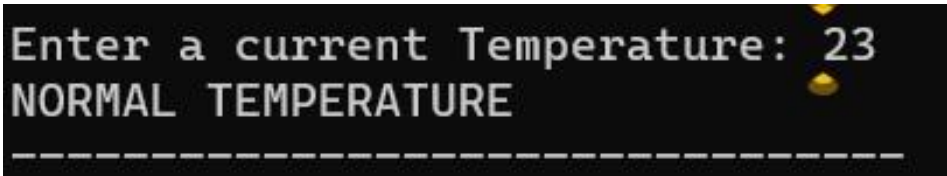
```c
    if (temp<=0)
        printf("FREEZING WEATHER");
else if(temp>0 && temp<10)
printf("VERY COLD");    else
if(temp>=10 && temp<20)
        printf("ITS COLD");
    else if(temp>=20 && temp<30)
printf("NORMAL TEMPERATURE");
    else if(temp>=30 && temp<40)
printf("ITS WARM");    else
if(temp>=40 && 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
_____
```
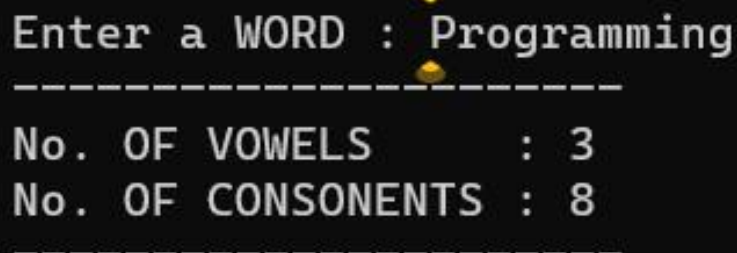


```
Enter a current Temperature: 23
NORMAL TEMPERATURE
_____
```

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

```c
#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':
        count++;
```

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

```
        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);
}
```

```c
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();
}
```


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

```c
#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 : ");
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;
```



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

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


}
```
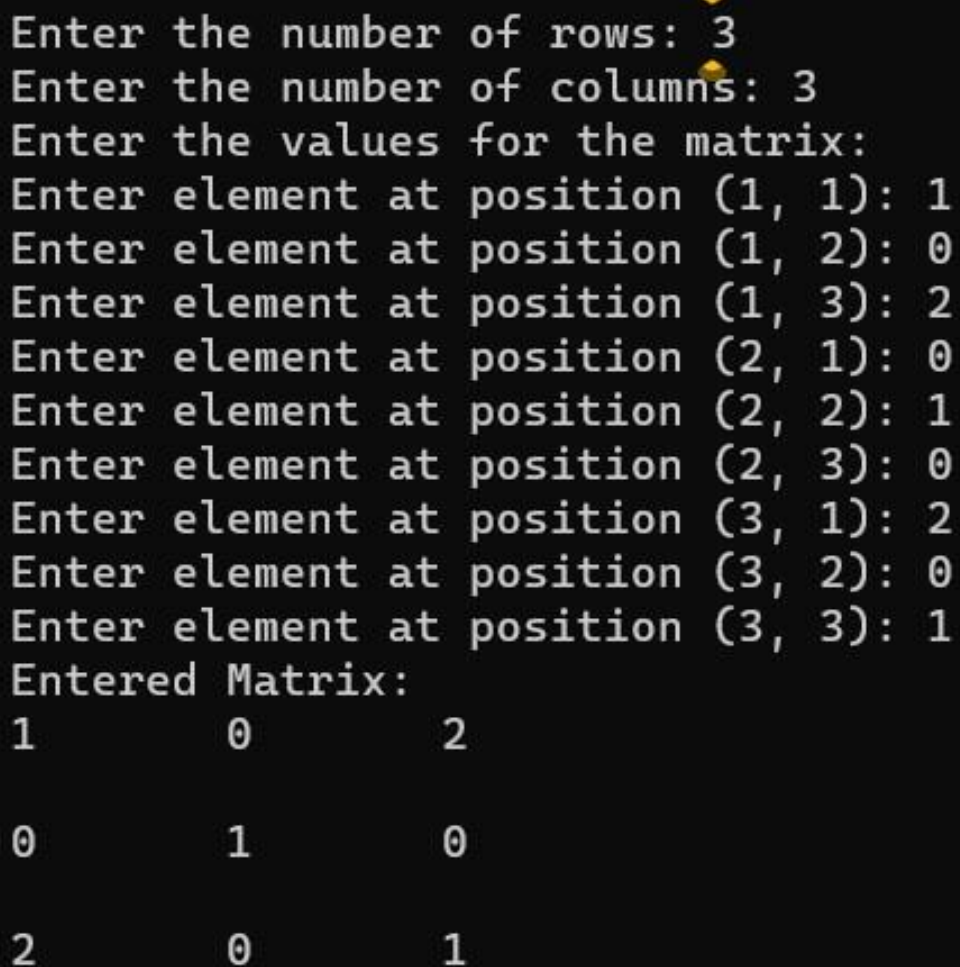
Q33.WAP TO MAKE A USER ENTERED MATRIX?

```c
#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?

```c
#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]);
        }
}
```

OUTPUT-

```
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
```