Name:- A. Harsha Vardhan.
Section:- D2
Roll No:- 1/22/FET/BCS/222
Subject:- PPS.

Assignment-2

1. WAP to check Wheather a Number is divisible by 5 and 11 or not?

Ans:-
```
# include < stdio.h>
# include < conio.h>
main ( )
{
  int a;
  Printf ("Enter the Number \n");
  Scanf ("%d",&a);
  if (a %. 5 ==0 && a %. 11 ==0).
  Printf (" Entered Number is ~~divisible~~ divisible by both
          5 and 11 \n");
else if (a %. 5 !=0 && a %. 11 ==0).
Printf ("Number is not divisible by 5 but divisible by 11");
else if (a %. 5 ==0 && a %. 11 !=0).
Printf ("Number is divisible by 5 Not divisible by 11");
}
```

2. WAP to check Wheather leap year or Not ?

Ans:-
```
# include <stdio.h>
# include <conio.h>
  main ( )
{
    int year;
Printf ("Enter the year \n");
```

```
Scanf ("%d", &year);
  if (year %. 4 ==0
  Printf ("Year is Leap year");
else
Printf ("Year is not a leap year");
}
```

3. WAP to check wheather character is alphabet or not?

Ans:-

```
#include <stdio.h>
#include <conio.h>
main()
{
  char a;
Printf ("Enter the character \n");
Scanf ("%c", &a);
if (a>='a' && a<='z') || (a>='A' && a<='z')
Printf ("%c is an alphabet \n", c);
else
Printf ("%c is not alphabet", c);
}
```

4. WAP to check wheather alphabet is vowel or constant.

Ans:-

```
#include <stdio.h>
#include <conio.h>
 main()
{
  char a;
Printf ("Enter the alphabet \n");
Scanf ("%c", &a);
if (a=='a' ||a=='e' ||a=='i' ||a=='o' || a=='u' || a=='A' ||
```

```
a='E'|| a='I'|| a='O'|| a='U')
Printf("%c is an vowel\n", a);
else
Printf("%c is Constonant",a);
}
```

5. WAP to check wheather character is alphabet (or) digit or special character.

Ans:-

```
#include<stdio.h>
#include<conio.h>
main()
{
char a;
Printf("Enter a character\n");
Scanf("%c", &a);
if((a>='a' && a<='z') && (a>='A' && a<='z')
Printf("%c is an Alphabet", a);
else if (a>='0' && a<='a')
Printf("%c is an integer", a);
else
Printf("%c is an special symbol", a);
}
```

6. WAP to check wheather alphabet is uppercase or lower case Letter.

Ans:-

```
#include<stdio.h>
#include<conio.h>
main()
{
```

```
char a;
Printf("Enter a character\n");
scanf("%c", &a);
if ((a>='a' && a<='z'))
Printf("%c is Lower case alphabet", a);
else if (a>='A' && a<='z')
Printf("%c is upper case Letter", a);
else
Printf("%c is not an alphabet", a);
}
```

7. WAP to input week number and print week day.

Ans:-

```
#include <stdio.h>
#include <conio.h>
main()
{
  int week;
Printf("Enter the day of week in");
scanf("%d", &week);
  if (week==1)
Printf("Monday");
else if (week==2)
Printf("Tuesday");
else if (week==3)
Printf("Wednesday");
else if (week==4)
Printf("Thursday");
else if (week==5);
Printf("Friday");
else if (week==6);
```

```
Printf ("Saturday");
else if (week == 7).
Printf ("Saturday");
}
```

8. WAP to input month Number & print No. of days in that month.

Ans:-

```
#include <stdio.h>
#include<conio.h> main ( ) {
int a;
Printf ("Enter the Number of month \n");
Scanf ("%d", a).
if (a==1|| a==3|| a==5|| a==7|| a==8|| a==10||a==12)
Printf ("Month has 31 days in it \n);
else if (a==2).
Printf ("Month has 28 or 29 days);
else if (a==4 ||a==6 ||a==9|| a==11).
Print f ("Month has 30 days in it);
}
```

9. WAP to Count no. of notes in given amount?

Ans:-

```
# include <stdio.h>.
# include <conio.h>.
main ().
{
int amount, n500, n100, n50, n20, n10, n5, n2, n1;
n500 = n100 = n50 = n20 = n10 = n5 = n2 = n1 = 0;
Printf (" Enter the amount \n");
Scanf ("%d", & amount);
```

```
if (amount >= 500) {
    n500 = amount /500;
    amount -= n5 * 500; }
if (amount >= 100) {
    n100 = amount /100;
    amount -= n100 * 100; }
if (amount >= 50) {
    n50 = amount /50;
    amount -= n50 * 50; }
if (amount >= 10) {
    n10 = amount %10;
    amount -= n10 * 10; }
if (amount >= 5) {
    n5 = amount /5;
    amount -= n5 * 5; }
if (amount >= 2) {
    n2 = amount /2;
    amount -= n2 * 2; }
if (amount >= 1) {
    n1 = amount; }
Printf ("Notes are : \n");
Printf ("500 = %d \n", n500);
Printf ("100 = %d \n", n100);
Printf ("50 = %d \n", n50);
Printf ("10 = %d \n", n10);
Printf ("5 = %d \n", n5);
Printf ("2 = %d \n", n2);
Printf ("1 = %d \n", n1);
}
```

10. WAP to check wheather triangle is Equilateral isosceles or scalen triangle.

Ans:-
```
#include<stdio.h>
#include<conio.h>
main()
{
  int a,b,c;
 Printf("Enter the sides of triangle\n");
 Scanf("%d%d%d",&a,&b,&c);
if (a==b && b==c)
Printf("Triangle is Equilateral"\n);
else if (a==b || b==c||c==a)
Printf("Triangle is isosceles"\n);
else
Printf("Triangle is Scaler");
}
```

11. WAP to calculate profit or Loss?

Ans:-
```
#include<stdio.h>
#include<conio.h>
main()
{
  int CP,SP, amt;
Printf("Enter cost prise\n");
scanf("%d",&CP);
Printf("Enter selling price\n");
scanf("%d",&SP);
if (SP>CP)
{ amt=SP-CP;
```

```
Printf (" Profit is %d", amt);
}
else if (CP > SP)
{ amt = CP-SP;
  Printf (" Loss is %d", amt);
}
else
  Printf ("No profit nor loss");
}
```

12. ~~WAP to find~~ Sum of all Natural numbers btw 1 ton.

12. WAP to input marks of 5 Subjects Phy, Chem, Bio, Maths, Comp Cal percentage and grade Per >= 90% → A, Per >= 80% → B, Per >= 70% → C, Per >= 60% → D, Per >= 40 → E, Per < 40% → F.

Ans:-

```
# include <stdio.h>
# include <conio.h>
main()
{
int phy, che, Bio, mat, Comp;
float per;
Printf (" Enter the Marks \n");
Scanf ("%d %d %d %d %d", &phy, &che, &Bio, &Mat, &Comp);
if (Per >= 90)
  Printf (" Grade is A");
else if (Per >= 80 && per <= 90)
  Printf ("Grade is B");
else if (Per >= 70 && per <= 80)
  Printf ("Grade is C");
else if (Per >= 60 && per <= 70)
  Printf ("Grade is D");
else if (Per >= 50 && per <= 60);
```

```
    Printf ("Grade is E");
else if (Per >=40 && Per <=50);
    Printf (" Grade is F");
}
```

13. WAP to print day of week using switch case.

Ans:-

```
#include <stdio.h>
#include <conio.h>
main ()
{
  int a;
  Printf ("Enter day of week\n");
  Scanf ("%d", &a);
switch (a).
{
  case 1;
Print f ("Monday");
 break;
 Case 2:
Print f ("Tuesday");
break;
Case 3;
Print f ("wednesday");
Case 4:
Print f ("Thursday");
Case 5;
Print f (" Friday");
Case 6;
Print f (" saturday");
Case 7;
Print f (" sunday");
  break;
}
```

14. WAP to print total No. of days using Switch Case? (10)

Ans:-

```
#include<stdio.h>
#include<conio.h>
main()
{
  int n;
Printf("Enter month\n");
scanf("%d", &n);
switch(n) {
 case 1:
Printf("31 days");
break;
 case 2:
Printf("28/29 days");
 break;
case 3:
Printf("31 days");
 break;
 case 4:
Printf("30 days");
break;
case 5:
Printf("31 days");
break;
case 6;
Printf ("30 days");
 break;
case 7:
Printf("31 days");
 break;
 case 8:
Printf("31 days");
 break;
case 9:
Printf("30 days");
 break;
```

```
Case 10:
Printf (" 31 days");
 break;
 Case 11:
Printf (" 30 days");
 break;
Case 12:
Print f ("31 days");
 break;
}
```

15. WAP to check number is positive, Negative, zero?

Ans:-

```
# include <stdio.h>.
# include <conio.h>.
main ().
{
int n;
Printf (" Enter any Number \n");
 Scanf ("%d", &n);
 switch (n > 0) {.
Case 1:
Print f ("%d is a positive Number ", n);
 break;
 Case 0:
     switch (n < 0) {.
      Case 1:
    Print f("%d is negative Number", n);
      Case 0:
    Print f ("%d zero", n);
    break; {
 break;
 }
  return 0;
  }
```

16. WAP to create simple calculator using switch case? (12)

Ans:-

```
#include <stdio.h>
#include<conio.h>
main()
{
 int a,b;
 char operation;
Printf ("Enter the Numbers \n");
Scanf ("%d%d", &a, &b);
fflash (stdin);
Printf (" Enter the operator (+,-, /, *) \n");
Scanf ("%c", &Operation);
Switch (Operation)
{
  Case '+':
Printf ("Sum is %d", a+b); break;
  Case '-':
Printf ("Subraction is %d", a-b); break;
  Case '/';
Printf ("Division is %d, a/b); break;
  Case '*':
Printf (" Multiplication is %d, a*b);
  break;
 }
}
```

17. WAP to print all Natural Numbers from 1 to n using while loop.

Ans:-

```
#include<stdio.h>
#include<conio.h>
  main()
   int i, a;
Printf (" All natural numbers up to %d :, n);
  Scanf ("%d", &n);
```

```
i=1;
while (i<=end).
 {
  Printf("%d\n", i);
    i++;
 {
  return 0;
}
```

18. WAP to print all Natural Numbers from n to 1 using while loop?

Ans:-

```
#include <stdio.h>.
#include <conio.h>.
main().
{
int n;
Printf ("Enter the end Number\n");
Scanf ("%d", &n);
 while (n>=1)
{
  Printf ("%d\n",n);
    n--;
 }
  return 0;
}
```

19. WAP to print all Even numbers from 1 to 100? Using while loop

Ans:-

```
#include <stdio.h>.
#include <conio.h>.
main().
{
    int i;
  Printf("Even Numbers till 100 are \n);
   i=1;
   while (i<100)
     if (i%2==0).
      {
```

```
    Printf ("%d\n", i); {
    i++;
}
```

20. WAP to print all Odd Numbers from 1 to 100 using DO while Loop.

Ans:-

```
#include <stdio.h>
#include <conio.h>
main()
{
  int i;
Printf ("Odd numbers from 1 to 100\n");
  i=1;
while (i<=100)
{
 Printf ("%d", i);
i = i+2;
}
return 0;
}
```

21. WAP to find sum of all Natural Numbers b/w 1 to n.

Ans:-

```
#include <stdio.h>
#include <conio.h>
main()
{
int i, sum=0, n;
Printf ("Enter upto where you want\n");
Scanf ("%d", &n);
for (i=0; i<=num; i++)
{
    sum = sum+i;
}
Printf ("Sum is %d", sum);
}
```

22. WAP to count No. of Digits in a Number?

Ans:-

```
#include <stdio.h>
#include <conio.h>
main ()
{
  long int n;
  int count=0;
Printf ("Enter an integer\n");
Scanf ("%ld",&n);
do {
  n/=10;
  ++count;
} while(n!=0);
Printf ("No. of digits are %d", count);
}
```

23. WAP to find first and Last digit using do while

Ans:-

```
#include <stdio.h>
#include <conio.h>
main()
{
  int n, sum=0, fd, ld;
Printf ("Enter the Number\n");
Scanf ("%d",&n);
ld = n%10;
while (n>=10)
{
  n = n/10;
}
fd= n;
Printf ("First digit is %d, last digit is %d", fd ,ld);
}
```

24. WAP to find sum of first & Last digit of given Number

Ans:-
```
#include <stdio.h>
#include <conio.h>
main()
{
int n, sum=0, ld, fd;
Printf("Enter any Numbers\n");
Scanf("%d", &n);
ld = num %. 10;
while (n>=10)
{
n=n/10;
}
fd=n;
sum = fd+ld;
Printf("sum of first digit, last digit is %d", sum);
}
```

25. WAP to calculate Sums of digits of Numbers using while Loop.

Ans:-
```
#include <stdio.h>
#include <conio.h>
main()
{
int n, m, sum =0;
Printf("Enter a Number\n");
Scanf("%d", &n);
while (n>0)
{
m = n%.10;
sum = sum+m;
n = n/10;
}
Printf("sum is %d", sum);
}
```

26. WAP to enter a number and reverse it?

Ans:-

```
#include <stdio.h>
#include <conio.h>
main()
{
  int n, r, sum=0, t;
printf("Enter a Number\n");
scanf("%d", &n);
for (t=n; n!=0; n=n/10)
{
   r=n%10;
   s=s*10+r;
}
printf("The number in reverse order is %d", sum);
}
```

27. WAP to check wheater Number is palindrome or not

Ans:-

```
#include <stdio.h>
#include <conio.h>
main()
{
  int n, r, sum=0, temp;
printf("Enter a Number");
scanf("%d", &n);
temp=n;
while (n>0)
{
   r=n%10;
   sum=(sum*10)+r;
   n=n/10;
}
  if (temp==sum)
```

```
Printf ("It's a palindrome Number");
else
Printf ("It's not a palindrome Number");
}
```

28. WAP to find power of a Number.

Ans:-

```
#include <stdio.h>
#include <conio.h>
main()
{
   int base, exp;
Long double result = 1.0;
Printf ("Enter the base\n");
Scanf("%d", &base);
Printf ("Enter the Exponent\n");
Scanf("%d", &exp);
while (exp != 0)
{
   result *= base;
   -- exp;
{
printf (" Answer = %.0Lf", result);
   return 0;
}
```

29. WAP to check wheater Number is Amstrong Number or not.

Ans:-

```
#include <stdio.h>
#include <conio.h>
main ()
{
  int n, r, sum = 0, temp;
Printf ("Enter the Number\n");
Scanf ("%d", &n);
```

```
for (temp = n; n != 0; n = n/10).
  {
    r = n % 10;
   sum = sum + (r * r * r);
  }
   if (sum == temp).
  Printf ("%d is an armstrong Number" temp);
else.
 Printf ("It's not an armstrong Number");
}.
```

30. WAP to print All Armstrong numbers from the n?

Ans:-

```
# include <stdio.h>.
# include <math.h>.
  main ().
{
  int num, ld, digits; sum, i, end;
 Printf (" Enter upper limit \n");
  Scanf ("%d", &end);
Printf (" Armstrong number between to %d are %d\n", end);
for (i = 1; i <= end; i++).
{
   sum = 0;
   num = i;
 digits = (int) log 10 (num) + 1;
while (n > 0)
{
 last digit = num % 10;
 Sum = Sum + ceil (pow (d, digits);
   num = num / 10;
{
  if (i == sum).
{
```

```
Printf ("%d ", i);
}
  return 0;
}
```

31. WAP to print fibonacci series upto n terms

Ans:-
```
# include <stdio.h>
# include <conio.h>
main()
{
  int n1=0, n2=1, n3, i, num;
Printf ("Enter the number upto where \n");
Scanf ("%d", &num);
Printf ("%d %d", n1, n2);
for (i=2; i<num; ++i)
{
  n3 = n1 + n2;
  Printf ("%d", n3);
  n1 = n2;
  n2 = n3;
}
  return 0;
}
```

32. WAP to print given star patterns

(i)
```
*
* *
* * *
* * * *
```

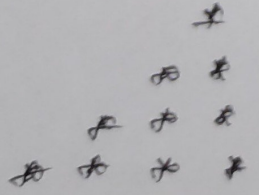
Ans:-
```
# include <stdio.h>
main()
int i,j, rows;
Printf ("Enter the No. of rows \n");
Scanf ("%d", &rows);
for (i=1; j<=rows; ++i) {
```

```
for (j=1; j<=P; ++j) {
    printf (" * n);
}
printf ("\n");
}
return 0;
}
```

(ii)
```
1
2  3
4  5  6
7  8  9  10.
```

Ans:-
```
#include <stdio.h>
main()
{
int rows, i, j, numbers;
Printf ("Enter the no. of rows\n");
Scanf ("%d", &rows);
for (i=1; i<=rows; i++).
{
for (j=1; j<=i; ++j) {
 printf ("%d ", number);
 ++number;
}
 print f ("\n");
}
 return 0;
}
```

(iii)



Ans:-
```
# include < stdio.h>.
# include < conio.h>.
```

```
main ()
{
 Int rows, i, j, k;
Printf ("Enter how many rows you would \n");
 Scanf ("%d", & rows);
for (i=0; i<= rows; i++).
  {
for(j=0; j< 2* (rows-i)-1; j++).
 Printf (" ");
 {
 for (k=0; k<=i; k++)
    Printf ("* ");
 {
  Printf ("\n");
 }
 return 0;
}
```

(iv)
```
1
2 2
3 3 3
4 4 4 4
```

Ans:-
```
# include <stdio.h>.
 # include <conio.h>.
 int i, j, input, number=1;
 Printf ("Enter the number you want to print in last row\n);
 Scanf ("%d", & input);
  for (i=1; i<= input + 1; ++i)
   {
    for (j=1; j<=i; ++j) {.
     Printf ("%d", number);
    {
     ++ number;
     Printf ("\n");
   } return 0;
   }
```