Name:Aksh MODULE: 3.3

- **Write a program to find out the max number from given array using function**

Ans:

```
#include <stdio.h>

int main() {

  int n;

  double arr[100];

  printf("Enter the number of elements (1 to 100): ");

  scanf("%d", &n);


  for (int i = 0; i < n; ++i) {

    printf("Enter number%d: ", i + 1);

    scanf("%lf", &arr[i]);

  }


  // storing the largest number to arr[0]
```

```
  for (int i = 1; i < n; ++i) {
    if (arr[0] < arr[i]) {
      arr[0] = arr[i];
    }
  }

  printf("Largest element = %.2lf",
arr[0]);

  return 0;
}
```

Output: Enter the number of elements (1 to 100): 4

Enter number1 : 45543

Enter number2: 3

Enter number3: 4

Enter number4: 2

Largest element = 45543.00

- **WAP of Addition, Subtraction, Multiplication and Division using Switch case.(Must Be Menu Driven)**

  Ans:

```
#include<stdio.h>

main()

{

 char choice;

 float a,b,ans=0;



     printf("\tEnter your choice \n\t1
for +\n\t 2 for - \n\t 3 for * \n\t 4
for / \n\t :");

     scanf("%c",&choice);


     switch(choice)

     {

         case '1':
```

```
                {
                    printf("Enter 2 number
:");
                    scanf("%f%f",&a,&b);
                    ans=a+b;
 printf("Addition=%0.2f",ans);
                    break;

                }
            case '2':
                {
                    printf("Enter 2 number
:");
                    scanf("%f%f",&a,&b);
                    ans=a-b;
 printf("Subtraction=%0.2f",ans);
                    break;
```

```
                }


            case '3':
                {
                    printf("Enter 2 number
:");
                    scanf("%f%f",&a,&b);
                    ans=a*b;
 printf("Multiplication=%0.2f",ans);
                    break;

                }
            case '4':
                {
                    printf("Enter 2 number
:");
```

```
                    scanf("%f%f",&a,&b);
                    ans=a/b;

 printf("Division=%0.2f",ans);
                    break;

                }
     }

}
```

Output:

```
Enter your choice
        1 for +
         2 for -
         3 for *
         4 for /
         :3
```

```
Enter 2 number :3
4
Multiplication=12.00
```

- **WAP to find reverse of string using recursion**

  Ans:

```
#include <stdio.h>

Void reverseSentence();

Int main() {

    Printf("Enter a sentence: ");

    reverseSentence();

    return 0;
```

```
}

Void reverseSentence() {

    Char c;

    Scanf(“%c”, &c);

    If (c != ‘\n’) {

        reverseSentence();

        printf(“%c”, c);

    }
```

```
}
```

Output:

```
Enter a sentence: Patel aksh
Hska letaP
```

- **WAP to find factorial using recursion**

Ans:

```
#include<stdio.h>

Long int multiplyNumbers(int n);

Int main() {

    Int n;

    Printf("Enter a positive integer: ");
```

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

    Printf("Factorial of %d = %ld", n,
multiplyNumbers(n));

    Return 0;

}

Long int multiplyNumbers(int n) {

    If (n>=1)

        Return n*multiplyNumbers(n-1);

    Else
```

```
        Return 1;


}
```

Output:

```
Enter a positive integer: 5

Factorial of 5 = 120
```

- **WAP to take two Array input from user and sort them in ascending or Descending order as per user's choice**

  Ans:

```
#include <stdio.h>

int main ()

{

    int num[20];

    int i, j, a, n;

    printf("enter number of elements in an array\n");

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

```
    printf("Enter the elements\n");
    for (i = 0; i < n; ++i)
        scanf("%d", &num[i]);
    for (i = 0; i < n; ++i){
        for (j = i + 1; j < n; ++j){
            if (num[i] > num[j]){
                a = num[i];
                num[i] = num[j];
                num[j] = a;
            }
        }
    }
    printf("The numbers in ascending
order is:\n");
    for (i = 0; i < n; ++i){
        printf("%d\n", num[i]);
    }
```

```
}
```

Output:

```
enter number of elements in an array
5
Enter the elements
8
58
45
5
212
The numbers in ascending order is:
5
8
45
58
212
```

- **WAP to make addition, Subtraction and multiplication of two matrix using 2-D Array**

Ans:

```
#include<stdio.h>

int main ()

{

    int i,j,a1[2][2],a2[2][2];

    for(i=0;i<2;i++)

    {

        for(j=0;j<2;j++)

        {

        printf("enter element:");

        scanf("%d",&a1[i][j]);

        }

    }


    printf("second element ");
```

```
for(i=0;i<2;i++)
{
for(j=0;j<2;j++)
{
printf("enter element :");
scanf("%d",&a2[i][j]);
}
}
for(i=0;i<2;i++)
{
    for(j=0;j<2;j++)
    {

  printf(" %d ",a1[i][j]+a2[i][j]);
    }
printf("\n");
}
```

```
    printf("\n\n");
    for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {
    printf(" %d ",a1[i][j]-a2[i][j]);
        }
    printf("\n");
    }
    printf("\n\n");

for(i=0;i<2;i++)
    {
        for(j=0;j<2;j++)
        {

      printf(" %d ",a1[i][j]*a2[i][j]);
```

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

Output:

```
enter element:54
enter element:5
enter element:8
enter element:5
second element enter element :2
enter element :6
enter element :4
enter element :8
 56  11
 12  13
```

```
52  -1

4  -3



108  30

32  40
```

- **WAP Find out length of string without using inbuilt function**

  Ans:

```
#include <stdio.h>


int main()

{

    char string[50];

    int i, length = 0;


    printf("Enter the string: \n");
```

```
    gets(string);

    for (i = 0; string[i] != '\0'; i++)

    {

        length++;

    }

    printf("The length of a string is
the number of characters in it \n");

    printf("So, the length of %s =
%d\n", string, length);

}
```

Output:

```
     Enter the string:

knhji f f f   r r rfr ft f

The length of a string is the number of
characters in it

So, the length of knhji f f f   r r rfr
ft f = 26
```

- **WAP to reverse a string and check that the string is palindrome or not**

  Ans:

```
 #include <stdio.h>

#include <string.h>



int main()

{

   char inputArray[100],
reversedArray[100];



   printf("Enter the string for
palindrome check \n");

   scanf("%s", inputArray);

   strcpy(reversedArray, inputArray);

   strrev(reversedArray);

   if(strcmp(inputArray, reversedArray)
== 0 )
```

```
      printf("%s is a palindrome.\n",
inputArray);

   else

      printf("%s is not a
palindrome.\n", inputArray);




   return 0;

}
```

Output:

```
Enter the string for palindrome check

123321

123321 is a palindrome.
```