####################### ASSIGNMENT- 20 ###################

1.Write a function to swap values of two in variables of calling function. (TSRS).

#include<stdio.h>

#include<string.h>

int swap(int \*p, int \*q)

{

    int t;

    t=\*p;

    \*p=\*q;

    \*q=t;

}

int main()

{

    int a,b;

    printf("Enter two numbers:\n");

    scanf("%d %d", &a,&b);

    swap(&a, &b);

    printf("a = %d \nb = %d",a,b);

}

2. Write a function to swap strings of two char arrays of calling functions. (TSRS).

#include<stdio.h>

#include<string.h>

void swap(char \*\*p, char \*\*q)

{

    char \*temp;

    temp = \*p;

    \*p=\*q;

    \*q=temp;

}

int main()

{

    char a[20],b[20];

    printf("Enter two strings:\n");

    fgets(a,20,stdin);

    fgets(b,20,stdin);

    swap(&a,&b);

    printf("a = %s \nb = %s",a,b);

}

3. Write a function to sort an array of int type values. [ void sort(int \*ptr,int size); ].

#include<stdio.h>

#include<string.h>

int sort(int \*p)

{

   int i,j,temp;

   for(i=0;i<6;i++)

   {

    for(j=i+1;j<6;j++)

    {

        if(\*(p+j)<\*(p+i))

        {

            temp=\*(p+i);

            \*(p+i)=\*(p+j);

            \*(p+j)=temp;

        }

    }

   }

}

int main()

{

    int a[20];

    printf("Enter elements of an array:\n");

    for(int i=0;i<6;i++)

     scanf("%d",&a[i]);

    sort(a);

    for(int i=0;i<6;i++)

      printf("%d ",a[i]);

}

4. Write a program in C to demonstrate how to handle the pointers in the program.

5. Write a program to find the maximum number between two numbers using a pointer.

#include<stdio.h>

#include<string.h>

int max(int \*p, int \*q)

{

   if(\*p>\*q)

    return \*p;

   else

    return \*q;

}

int main()

{

    int a,b;

    printf("Enter numbers:\n");

    scanf("%d %d",&a,&b);

    printf("Maximum number is: ");

    printf("%d ",max(&a,&b));

}

6. Write a program to calculate the length of the string using a pointer.

#include<stdio.h>

#include<string.h>

void reverse(char \*p)

{

    int temp=0;

    for(int i=0;\*(p+i);i++)

     {

        temp++;

     }

     printf("%d",temp);

}

int main()

{

   char a[20];

   printf("Enter a string: ");

   gets(a);

   reverse(&a[0]);

}

7. Write a program to count the number of vowels and consonants in a string using a pointer.

#include<stdio.h>

#include<string.h>

void reverse(char \*p)

{

    int v=0,c=0;

    for(int i=0;\*(p+i);i++)

     {

        if(\*(p+i)=='a' || \*(p+i)=='e' || \*(p+i)=='i' || \*(p+i)=='o' || \*(p+i)=='u')

         v++;

        else

         c++;

     }

     printf("%d vowel and %d consonant.",v,c);

}

int main()

{

   char a[20];

   printf("Enter a string: ");

   gets(a);

   reverse(&a[0]);

}

8..Write a program to compute the sum of all elements in an array using pointers.

#include<stdio.h>

#include<string.h>

void sum(int \*p)

{

   int i , s=0;

   for(i=0;i<5;i++)

     s =s + \*(p+i);

   printf("sum is %d ",s);

}

int main()

{

    int i,a[5];

    printf("Enter all 5 numbers:\n");

    for(i=0;i<5;i++)

     scanf("%d",&a[i]);

    sum(a);

}

9. Write a program to print the elements of an array in reverse order.

#include<stdio.h>

#include<string.h>

void arr(int \*p)

{

   int i;

   printf("Elements in reverse order:");

   for(i=0;i<5;i++)

     printf("%d ",\*(p+4-i));

}

int main()

{

    int i,a[5];

    printf("Enter all 5 numbers:\n");

    for(i=0;i<5;i++)

     scanf("%d",&a[i]);

    arr(a);

}

10. Write a program to print a string in reverse using a pointer.