Assignement 20

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

Output:

#include<iostream>

using namespace std;

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

{

    int temp;

    temp=\*p;

    \*p=\*q;

    \*q=temp;

}

int main()

{

    int x,y;

    cout<<"Enter the two numbers for swaping: "<<endl;

    cin>>x>>y;

    swap(&x,&y);

    cout<<"x="<<x<<"y="<<y;

    return 0;

}

Output:

Enter the two numbers for swaping:

24 56

x=56y=24

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

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

#include<iostream>

using namespace std;

void sort\_array(int \*a, int x)

{

  for(int i=0;i<x-1;i++)

  {

    for (int j = i; j < x; j++)

    {

        if(a[i]>a[j])

        {

            int temp=0;

            temp=a[i];

            a[i]=a[j];

            a[j]=temp;

        }

    }

  }

}

int main()

{

    int a[7]={5,8,7,9,4,6,3};

    sort\_array(a,7);

    for (int i = 0; i < 7; i++)

    {

        cout<<a[i]<<" ";

    }

    return 0;

}

Ouput;

3 4 5 6 7 8 9

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

#include<iostream>

using namespace std;

void greater\_num(int \*x, int \*y)

{

    if(\*x==\*y)

    {

        cout<<"both numbers are same."<<endl;

    }

    if(\*x>\*y)

    {

        cout<<"greater number : "<<\*x<<endl;

    }

    else

        cout<<"greater number :"<<\*y<<endl;

}

int main()

{

    int a,b;

    cout<<"enter the two numbers: "<<endl;

    cin>>a>>b;

    greater\_num(&a,&b);

    return 0;

}

Output:

enter the two numbers:

1 9

greater number :9

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

Program;

#include<iostream>

#include<cstring>

using namespace std;

void length\_of\_str(char \*str)

{

    cout<<" length of the string is :  "<<strlen(str);

}

int main()

{

    char str[100];

    cout<<"enter the string."<<endl;

    gets(str);

    length\_of\_str(str);

    return 0;

}

Output:

enter the string.

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length of the string is : 6

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

pointer.

Input;

#include<iostream>

#include<cstring>

using namespace std;

int length\_of\_str(char \*str)

{

    return strlen(str);

}

int count\_vowels(char \*str, int n)

{

    int count=0;

    for(int i=0; i<n; i++)

    {

        if(str[i]=='a' || str[i]=='e'  || str[i]=='i' ||str[i]=='o' || str[i]=='u')

        {

            count++;

        }

    }

    return count;

}

int main()

{

    char str[100];

    cout<<"enter the string."<<endl;

    gets(str);

    int len=length\_of\_str(str);

    int vowel= count\_vowels(str,len);

    int consonant= len-vowel;

    cout<<"the length of string is : "<<len<<endl;

    cout<<"vowels : "<<vowel<<endl;

    cout<<"consonants : "<<consonant<<endl;

    return 0;

}

Outpit:

enter the string.

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the length of string is : 13

vowels : 5

consonants : 8

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

Program;

#include<iostream>

#include<cstring>

using namespace std;

int sum\_of\_digit(int \*a, int n)

{

    int sum=0;

    for(int i=0; i<n; i++)

    {

        sum=sum+a[i];

    }

    return sum;

}

int main()

{

    int a[5], sum=0;

    cout<<"enter the 5 numbers"<<endl;

    for(int i=0; i<5;i++)

    {

        cin>>a[i];

    }

    sum=sum\_of\_digit(a,5);

    cout<<"the sum of the elements is : "<<sum<<endl;

    return 0;

}

Output:

enter the 5 numbers

5 8 9 6 4

the sum of the elements is : 32

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

Program;

#include<iostream>

#include<cstring>

using namespace std;

void print\_reverse(int \*a, int n)

{

    for(int i=(n-1); i>=0; i--)

    {

        cout<<a[i]<<" ";

    }

}

int main()

{

    int a[5], sum=0;

    cout<<"enter the 5 numbers"<<endl;

    for(int i=0; i<5;i++)

    {

        cin>>a[i];

    }

    print\_reverse(a,5);

    return 0;

}

Output:

enter the 5 numbers

5 9 7 6 1

1 6 7 9 5

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

#include<iostream>

#include<cstring>

using namespace std;

void print\_reverse(char \*a, int n)

{

    for(int i=(n-1); i>=0; i--)

    {

        cout<<a[i];

    }

}

int main()

{

    char a[100];

    cout<<"enter the  string"<<endl;

    gets(a);

    int len= strlen(a);

    print\_reverse(a,len);

    return 0;

}

Output;

enter the string

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