**Functions**

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#include<iostream.h>

void sum(int,int);

int main(){

sum(5,7);

return 0;

}

void sum(int a,int b)

{

int total;

total=a+b;

cout<<"sum is"<<total<<endl;

}

**Call by value**

#include<iostream.h>

void swap(int,int);

int main(){

int ival1,ival2;

cout<<"input two numbers"<<endl;

cin>>ival1;

cin>>ival2;

swap(ival1, ival2);

cout<<" "<<ival1<<" "<<ival2<<endl;

return 0;

}

void swap(int x,int y)

{

int temp;

temp=x;

x=y;

y=temp;

cout<<" "<<x<<" "<<y<<endl;

}

Call by reference

#include<iostream.h>

void swap(int &,int &);

int main(){

int ival1,ival2;

cout<<"input two numbers"<<endl;

cin>>ival1;

cin>>ival2;

swap(ival1 , ival2);

cout<<" "<<ival1<<" "<<ival2<<endl;

return 0;

}

void swap(int &x,int &y)

{

int temp;

temp=x;

x=y;

y=temp;

cout<<" "<<x<<" "<<y<<endl;

}

**Pass array to function**

1.)

#include<iostream.h>

void addnum(int arr[5]);

int main(){

int x;

int my\_arr[5];

cout<<"input five numbers"<<endl;

for(int i=0;i<5;i++){

cin>>my\_arr[i];

}

addnum(my\_arr);

return 0;

}

void addnum(int arr[5])

{

int sum=0;

for(int j=0;j<5;j++){

sum +=arr[j];

}

cout<<" "<<sum<<endl;

}

2.) Write program to enter five numbers to the array and sort them.

3.) Write a program to check whether given number is palindrom. (Number = reverse order number)

**Pointers**

1)#include<iostream.h>

int main(){

char var='A';

cout<<"Name of the variable is :var"<<endl;

cout<<"value of the variable is :"<<var<<endl;

cout<<"address of the variable is :"<<(unsigned long)&var<<endl;

cout<<"output of &var is :"<<&var<<endl;

return 0;

}

2)

#include<iostream.h>

int main(){

char var='A';

char \*ptr=&var;

cout<<"Name of the variable is :var"<<endl;

cout<<"value of the variable is :"<<var<<endl;

cout<<"address of the variable is :"<<(unsigned long)&var<<endl;

cout<<"out put of &var is :"<<&var<<endl;

cout<<\*ptr<<endl;

cout<<ptr<<endl;

return 0;

}

3)

Enter three numbers and insert memory address of these three numbers into the array and display them.

**Use of objects and classes**

1. The program uses member functions to take two numbers add them and display the result.

#include<iostream.h>

class calculator

{

private:

int inum1,inum2,inum3;

public:

void input(int ivar1,int ivar2);

void sum();

void disp();

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};

void calculator::input(int ivar1,int ivar2)

{

cout<<"function to assign values to the member data"<<endl;

inum1=ivar1;

inum2=ivar2;

}

void calculator::sum()

{

cout<<"function to find the sum of two numbers"<<endl;

inum3=inum1+inum2;

}

void calculator::disp()

{

cout<<"The sum of the two numbers is"<<inum3<<endl;

}

int main()

{

calculator A1;

int x,y;

cout<<"input two numbers"<<endl;

cin>>x;

cin>>y;

A1.input(x,y);

A1.sum();

A1.disp();

return 0;

}

1. Define class ‘students’ with two subjects. Calculate the total subject marks separately and display them.