**Arrays within a Class**

* Arrays can be declared as the members of a class.
* The arrays can be declared as private, public or protected members of the class.
* To understand the concept of arrays as members of a class, consider this example.

A program to demonstrate the concept of arrays as class members

*Example1:*

**#include<iostream>**

**const int size=5;**

**class student**

**{**

**int roll\_no;**

**int marks[size];**

**public:**

**void getdata ();**

**void tot\_marks ();**

**} ;**

**void student :: getdata ()**

**{**

**cout<<"\nEnter roll no: ";**

**cin>>roll\_no;**

**for(int i=0; i<size; i++)**

**{**

**cout<<"Enter marks in subject"<<(i+1)<<": ";**

**cin>>marks[i] ;**

**}**

**void student :: tot\_marks() //calculating total marks**

**{**

**int total=0;**

**for(int i=0; i<size; i++)**

**total+ = marks[i];**

**cout<<"\n\nTotal marks "<<total;**

**}**

**void main()**

**student stu;**

**stu.getdata() ;**

**stu.tot\_marks() ;**

**getch();**

**}**

**Output:**

Enter roll no: 101  
Enter marks in subject 1: 67  
Enter marks in subject 2 : 54  
Enter marks in subject 3 : 68  
Enter marks in subject 4 : 72  
Enter marks in subject 5 : 82  
Total marks = 343

***Example2:***

#include<iostream>

#include<stdlib.h>

using namespace std;

class ITEM

{

int itemcode[5];

float it\_price[5];

public:

void initialize(void);

float largest(void);

float sum(void);

void display\_items(void);

};

//....Member function definitions follow....

void ITEM::initialize(void)

{

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

{

cout<<"\n"<<"Item No:"<<(i+1);

cout<<"\n"<<"Enter Item Code:";

cin>>itemcode[i];

cout<<"\n"<<"Enter Item Price:";

cin>>it\_price[i];

cout<<"\n";

}

}

float ITEM::largest(void)

{

float large=it\_price[0];

for(int i=1;i<5;i++)

{

if(large<it\_price[i])

large=it\_price[i];

}

return large;

}

float ITEM::sum(void)

{

float sum=0;

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

sum=sum+it\_price[i];

return sum;

}

void ITEM::display\_items(void)

{

cout<<"\nCode Price\n";

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

{

cout<<"\n"<<itemcode[i];

cout<<" "<<it\_price[i];

}

cout<<"\n";

}

int main()

{

ITEM order;

order.initialize();

float total,biggest;

int ch=0;

do

{

cout<<"\nMain Menu\n";

cout<<"\n1.Display largest price.";

cout<<"\n2.Display sum of prices.";

cout<<"\n3.Display item list.";

cout<<"\nEnter your choice(1-3):";

cin>>ch;

switch(ch)

{

case 1: biggest=order.largest();

cout<<"The largest price is"<<biggest<<"\n";

break;

case 2: total=order.sum();

cout<<"The sum of all prices is"<<total<<"\n";

break;

case 3: order.display\_items();

break;

default: cout<<"Wrong Choice!\n";

break;

}

}while(ch>=1&&ch<=3);

return 0;

}

**Output:**

Item No:1

Enter Item Code:101

Enter Item Price:345

Item No:2

Enter Item Code:102

Enter Item Price:567

Item No:3

Enter Item Code:103

Enter Item Price:432

Item No:4

Enter Item Code:104

Enter Item Price:450

Item No:5

Enter Item Code:105

Enter Item Price:678

Main Menu

1.Display largest price.

2.Display sum of prices.

3.Display item list.

Enter your choice(1-3):1

The largest price is 678

Main Menu

1.Display largest price.

2.Display sum of prices.

3.Display item list.

Enter your choice(1-3):