

PRACTICAL NO :-02

AIM:- Create a program to insert element at first position last position and at specific position of an array .

PROGRAM:- (At First Position)

```
#include<iostream>

using namespace std;

int main(){

    int arr[100];

    int size;

    cout<<"enter the size of array"<<endl;

    cin>>size;

    int num;

    cout<<"enter the number you want to add first pos"<<endl;

    cin>>num;

    cout<<"Enter the array"<<endl;

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

        cin>>arr[i];

    }

    for(int i=size;i>0;--i){

        arr[i]=arr[i-1];

    }

    arr[0]=num;

    cout<<"updated array is"<<endl;

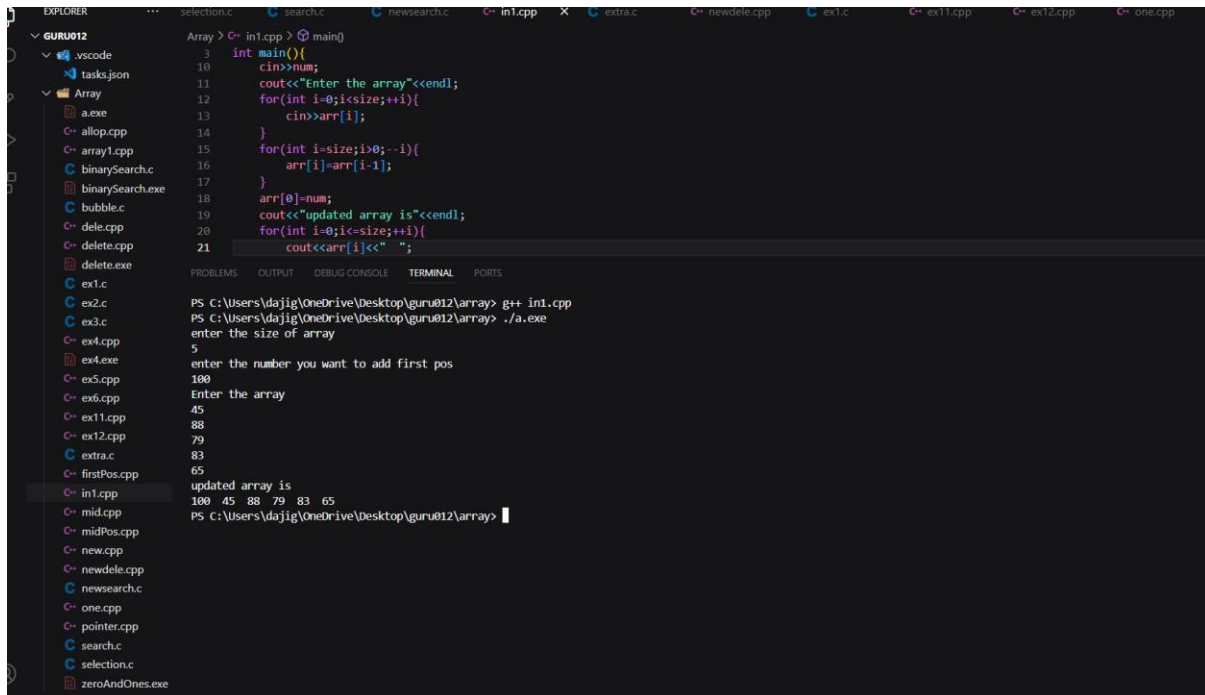
    for(int i=0;i<=size;++i){

        cout<<arr[i]<<" ";

    }

}
```

[OUTPUT]



```
3  int main(){
10  cin>>num;
11  cout<<"Enter the array"<<endl;
12  for(int i=0;i<size;++i){
13      cin>>arr[i];
14  }
15  for(int i=size;i>0;--i){
16      arr[i]=arr[i-1];
17  }
18  arr[0]=num;
19  cout<<"updated array is"<<endl;
20  for(int i=0;i<size;++i){
21      cout<<arr[i]<<" ";
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\dajig\OneDrive\Desktop\guru012\array> g++ in1.cpp
PS C:\Users\dajig\OneDrive\Desktop\guru012\array> ./a.exe
enter the size of array
5
enter the number you want to add first pos
100
Enter the array
45
88
79
83
65
updated array is
100 45 88 79 83 65
PS C:\Users\dajig\OneDrive\Desktop\guru012\array>
```

PROGRAM:- (At last position)

```
#include<iostream>

using namespace std;

int main(){

    int array[50];

    int size;

    int element;

    cout<<"enter the element you want to add at end"<<endl;

    cin>>element;

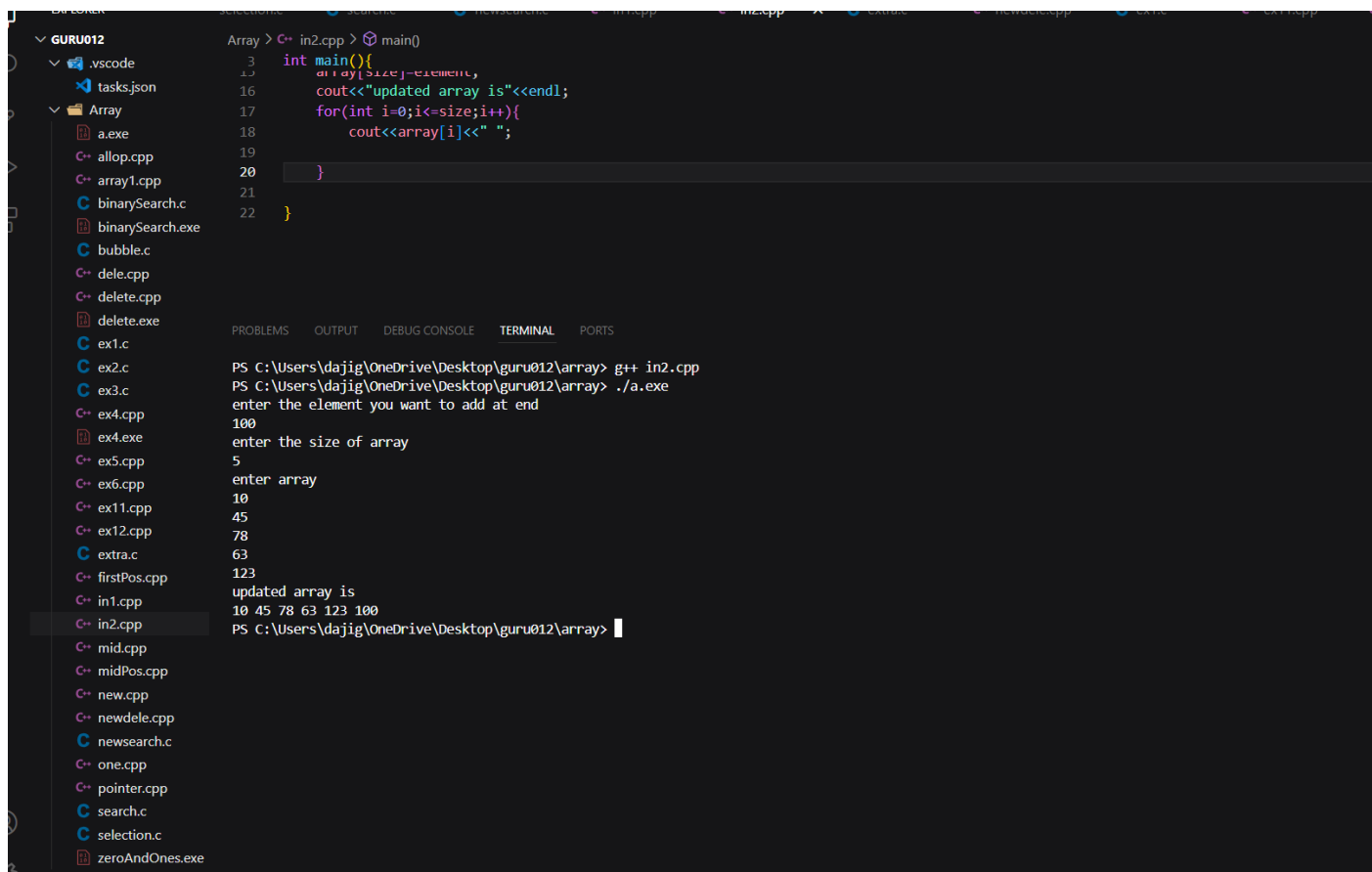
    cout<<"enter the size of array"<<endl;
```

```
cin>>size;
cout<<"enter array"<<endl;
for(int i=0;i<size;i++){
    cin>>array[i];
}
array[size]=element;
cout<<"updated array is"<<endl;
for(int i=0;i<=size;i++){
    cout<<array[i]<<" ";

}

}
```

[OUTPUT]



PROGRAM:- (At specific position)

```
#include<iostream>
```

```
using namespace std;
```

```
int main(){
```

```
    int array[100];
```

```
    int size;
```

```
    cout<<"enter the size of array"<<endl;
```

```
    cin>>size;
```

```
    int element;
```

```
    cout<<"enter the element you want to add"<<endl;
```

```
    cin>>element;
```

```

int position;

cout<<"enter the position of element in which you want to add element"<<endl;

cin>>position;

cout<<"enter the array"<<endl;

for(int i=0;i<size;i++){
    cin>>array[i];
}

for(int i=size;i>position;i--){

    array[i]=array[i-1];
}

array[position]=element;

cout<<"updated array is"<<endl;

for(int i=0;i<=size;i++){
    cout<<array[i]<<" ";
}
}

```

[OUTPUT]

```
EXPLORER
GURU012
Array
  a.exe
  allop.cpp
  array1.cpp
  binarySearch.c
  binarySearch.exe
  bubble.c
  dele.cpp
  delete.cpp
  delete.exe
  ex1.c
  ex2.c
  ex3.c
  ex4.cpp
  ex4.exe
  ex5.cpp
  ex6.cpp
  ex11.cpp
  ex12.cpp
  extra.c
  firstPos.cpp
  in1.cpp
  in2.cpp
  in3.cpp
  in4.cpp
  mid.cpp
  midPos.cpp
  new.cpp
  newdele.cpp
  newsearch.c
  one.cpp
  pointer.cpp
  search.c
  selection.c
  zeroAndOnes.exe

Array > C++ in4.cpp > main()
3
21 int main(){
22     array[i]=array[i-1];
23 }
24
25 array[position]=element;
26 cout<<"updated array is"<<endl;
27 for(int i=0;i<=size;i++){
28     cout<<array[i]<<" ";
29 }
```

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\dajig\OneDrive\Desktop\guru012\array> g++ in4.cpp
PS C:\Users\dajig\OneDrive\Desktop\guru012\array> ./a.exe
enter the size of array
5
enter the element you want to add
500
enter the position of element in which you want to add element
3
enter the array
45
50
55
60
65
updated array is
45 50 55 500 60 65
PS C:\Users\dajig\OneDrive\Desktop\guru012\array>
```

PROGRAM:- (delete at first position)

```
#include<iostream>
```

```
using namespace std;
```

```
int main(){
```

```
    int array[50];
```

```
    int size;
```

```
    cout<<"enter the size of array"<<endl;
```

```
    cin>>size;
```

```
    cout<<"enter array"<<endl;
```

```
    for(int i=0;i<size;i++){
```

```
cin>>array[i];
}
```

```
cout<<"updated is array"<<endl;
for(int i=1;i<=size-1;i++){
cout<<array[i]<<endl;
}
}
```

[OUTPUT]

The screenshot shows a Visual Studio Code editor with a project named 'GURU012'. The file explorer on the left shows a folder 'Array' containing several files, including 'delet.cpp'. The main editor window displays the code for 'delet.cpp', which is a C++ program that takes an array size and elements as input, prints the array, and then prints 'updated is array'. The terminal at the bottom shows the execution of the program, with the following output:

```
PS C:\Users\dajig\OneDrive\Desktop\guru012\array> g++ delet.cpp
PS C:\Users\dajig\OneDrive\Desktop\guru012\array> ./a.exe
enter the size of array
5
enter array
10
20
30
midPos.cpp
10
50
updated is array
20
30
10
50
```

Deleting element at end

PROGRAM:-

```
#include<iostream>
```

```
using namespace std;
```

```
int main(){
```

```
    int array[50];
```

```
    int size;
```

```
    cout<<"enter the size of array"<<endl;
```

```
    cin>>size;
```

```
    cout<<"enter array"<<endl;
```

```
    for(int i=0;i<size;i++){
```

```
        cin>>array[i];
```

```
    }
```

```
    cout<<"updated is array"<<endl;
```

```
    for(int i=0;i<size-1;i++){
```

```
        cout<<array[i]<<endl;
```

```
    }
```

```
}
```

[OUTPUT]


```
2 #include<iostream>
3 using namespace std;
4 int main(){
5     int array[50];
6     int size;
7
8     cout<<"enter the size of array"<<endl;
9     cin>>size;
10    cout<<"enter array"<<endl;
11    for(int i=0;i<size;i++){
12        cin>>array[i];
13    }
14
15    cout<<"updated is array"<<endl;
16    for(int i=0;i<size-1;i++){
17        cout<<array[i]<<endl;
18    }
19 }
20
21
22
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

PS C:\Users\dajig\OneDrive\Desktop\guru012\array> g++ deletat.cpp
PS C:\Users\dajig\OneDrive\Desktop\guru012\array> ./a.exe
enter the size of array
5
enter array
10
20
30
40
50
updated is array
10
20
30
40
PS C:\Users\dajig\OneDrive\Desktop\guru012\array>

Deleting element at any position

PROGRAM:-

```
#include<iostream>
```

```
using namespace std;
```

```
int main(){
```

```
    int array[20];
```

```
    int size;
```

```
    cout<<"size of array is"<<endl;
```

```
    cin>>size;
```

```
    int pos;
```

```
    cout<<"enter position of element you want to delete"<<endl;
```

```
    cin>>pos;
```

```
cout<<"enter array"<<endl;
for(int i=0;i<size;i++){
    cin>>array[i];
}
for(int i=pos;i<size-1;i++){
    array[i]=array[i+1];
}
for(int i=0;i<size-1;i++){
    cout<<array[i]<<" ";
}
}
```

[OUTPUT]

Github Link: <https://github.com/guru24961/Data-Structure-practical>

