

Q1 Write down a program in C++ that take an age of 10 students as an input from user and display the largest age of the student from an array.

```
#include <iostream>

using namespace std;

int main(){
    label:
    int lar=0,ind;

    int agearr[10];
    for(int i=0;i<10;i++){
        cout<<"enter age of "<<i+1<<" student"<<endl;
        cin>>agearr[i];
        if(agearr[i]<0){
            cout<<"Age cannot be negative. reinput all ages "<<endl;
            goto label;
        }
        if(lar<agearr[i]){
            lar=agearr[i];
            ind=i+1;
        }
    }
    cout<<"the oldest student is the "<<ind<<" student"<<" of age "<<lar;
}
```

```
C:\C++\Codes\ADD of 3 ARR.exe
enter age of 1 student
12
enter age of 2 student
15
enter age of 3 student
14
enter age of 4 student
13
enter age of 5 student
12
enter age of 6 student
10
enter age of 7 student
11
enter age of 8 student
18
enter age of 9 student
17
enter age of 10 student
19
the oldest student is the 10 student of age 19
-----
Process exited after 10.55 seconds with return value 0
Press any key to continue . . .
```

Q2 Write down a program in C++ that take an input data from user in three different arrays and then add the arrays and store them in another array. (Through Dynamic array concept).

```
#include <iostream>

using namespace std;

int main(){

    int i,sor,a=0;

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

    cin>>sor;

    int *dyarr=new int(sor);

    int *dyarr2=new int(sor);

    int *dyarr3=new int(sor);

    int *dyarrans=new int(sor);

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

        if(a==0){

            cout<<"enter number in the "<<i<<" index of the first array"<<endl;

            cin>>dyarr[i];
```

```

    }
    else if(a==1){
        cout<<"enter number in the "<<i<<" index of the second
array"<<endl;

        cin>>dyarr2[i];
    }
    else if(a==2){
        cout<<"enter number in the "<<i<<" index of the third
array"<<endl;

        cin>>dyarr3[i];
    }
    else{
        break; }
    if(i==sor-1){
        a++;
        i=-1;

```

```

C:\C++\Codes\ADD of 3 ARR.s.exe
enter size of the arrays
3
enter number in the 0 index of the first array
2
enter number in the 1 index of the first array
3
enter number in the 2 index of the first array
1
enter number in the 0 index of the second array
4
enter number in the 1 index of the second array
5
enter number in the 2 index of the second array
2
enter number in the 0 index of the third array
3
enter number in the 1 index of the third array
3
enter number in the 2 index of the third array
3
The answer of the addition of the three arrays is
9
11
6
-----
Process exited after 28.91 seconds with return value 0
Press any key to continue . . .

```

```

    cout<<"The answer of the addition of the three arrays is "<<endl;

    for(int i=0;i<sor;i++){
        dyarrans[i]=dyarr[i]+dyarr2[i]+dyarr3[i];

        cout<<dyarrans[i]<< endl;
    }
}

```

}}

Q3 Write a program for linear search using the concept of dynamic array (Note: Program should handle the situation if item is not in the list)

```
#include <iostream>

using namespace std;

int main(){
    int i,sor,a=0;
    cout<<"enter size of array"<<endl;
    cin>>sor;
    int *dyarr=new int(sor);
    cout<<"Enter "<<sor<<" items"<<endl;
    for(i=0;i<sor;i++){
        cin>>dyarr[i];

    }

    for(i=0;i<sor;i++){
        cout<<"You entered: "<<dyarr[i]<<endl;
    }

    int check;
    cout<<"Enter what number to check for"<<endl;
    cin>>check;

    for(i=0;i<sor;i++){
        if(check==dyarr[i])
        {
            cout<<check<<" exists in the array and exists at "<<i<<"
index"<<endl;
            a++;
        }
    }
}
```

```
}
```

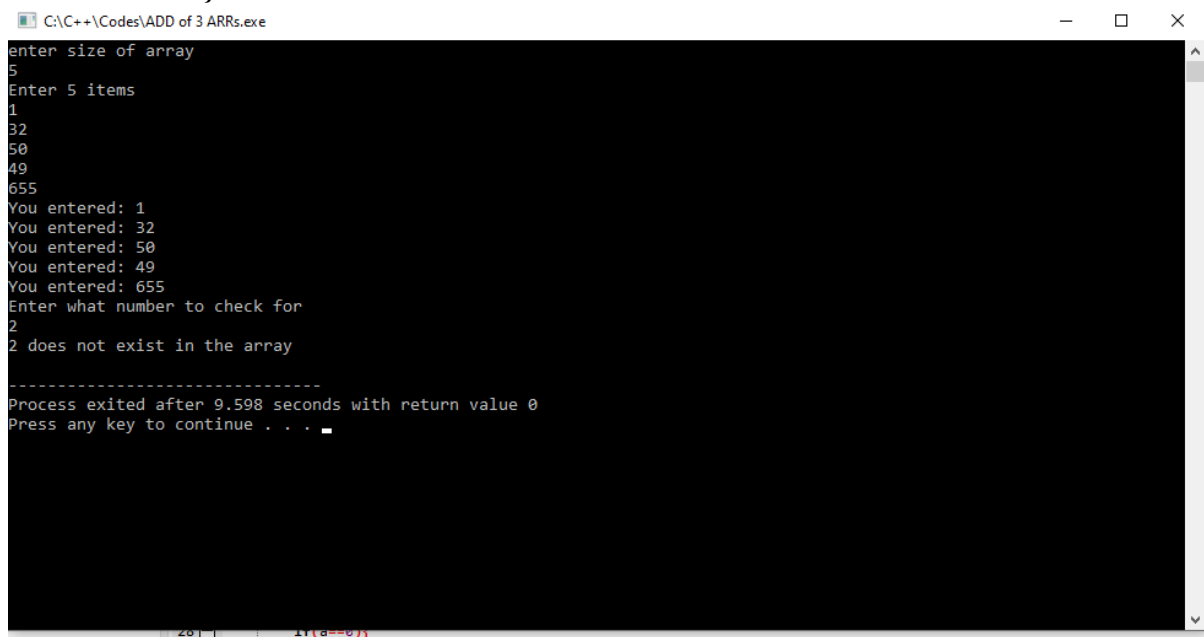
```
}
```

```
if(a==0){
```

```
cout<<" does not exist in the array "<<endl;
```

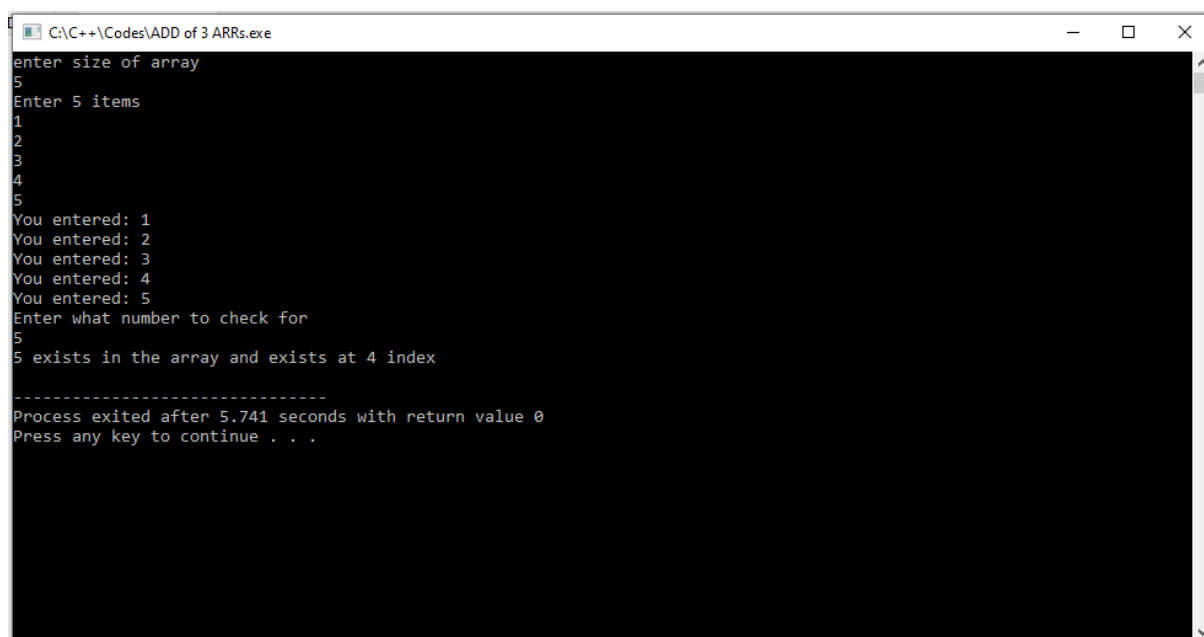
```
}
```

```
}
```



```
C:\C++\Codes\ADD of 3 ARR.exe
enter size of array
5
Enter 5 items
1
32
50
49
655
You entered: 1
You entered: 32
You entered: 50
You entered: 49
You entered: 655
Enter what number to check for
2
2 does not exist in the array

-----
Process exited after 9.598 seconds with return value 0
Press any key to continue . . .
```



```
C:\C++\Codes\ADD of 3 ARR.exe
enter size of array
5
Enter 5 items
1
2
3
4
5
You entered: 1
You entered: 2
You entered: 3
You entered: 4
You entered: 5
Enter what number to check for
5
5 exists in the array and exists at 4 index

-----
Process exited after 5.741 seconds with return value 0
Press any key to continue . . .
```