

AIM : Create an array of size n and write a program to insert an element (begining, end and specific position).

PROGRAM:

(BEGGING)

```
# include <iostream>

using namespace std;

int main()
{
    int ar[100],n,i,num;

    cout<<"enter the no. of element you want in array:";

    cin>>n;

    cout<<"entering element in array \n";


    for(i=0;i<n;i++)
    {
        cout<<"enter element:";

        cin>>ar[i];
    }

    cout<<"displaying the array\n";


    for(i=0;i<n;i++)
    {
        cout<<ar[i]<<"\t";
    }


    // to insert element at the begining


    int pos=0;
    for(i=n;i>=0;i--)
    {
        ar[i+1]=ar[i];
    }
```

```

n++;

cout<<"\nenter the element for 1st position:";

cin>>num;

ar[pos]=num;

cout<<"after inserting the element at 1st position :\n";

for(i=0;i<n;i++)
{
    cout<<ar[i]<<"\t";
}
}

```

OUTPUT

```

PS C:\Users\chuna> g++ insrtbeg.cpp
PS C:\Users\chuna> ./a.exe
enter the no. of element you want in array:10
entering element in array
enter element:12
enter element:23
enter element:34
enter element:45
enter element:56
enter element:67
enter element:78
enter element:89
enter element:90
enter element:64
displaying the array
12    23    34    45    56    67    78    89    90    64
enter the element for 1st position:10
after inserting the element at 1st position :
10    12    23    34    45    56    67    78    89    90    64
PS C:\Users\chuna>

```

PROGRAM: (END)

```

# include <iostream>

using namespace std;

int main()
{
    int ar[100],i,n,num;

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

    cin>>n;

```

```

// entering element in the array
for(i=0;i<n;i++)
{
    cout<<"enter "<<i+1<<" element:";
    cin>>ar[i];
}
cout<<"your array is \n";
for(i=0;i<n;i++)
{
    cout<<ar[i]<<" ";
}
cout<<"\nenter the element you want at the end:";
cin>>num;
ar[n]=num;
cout<<"after inserting the element at the end array becomes\n";
n++;
for(i=0;i<n;i++)
{
    cout<<ar[i]<<" ";
}
}

```

OUTPUT

```

PS C:\Users\chuna> g++ insrtend.cpp
PS C:\Users\chuna> ./a.exe
enter the size of array:5
enter 1 element:12
enter 2 element:23
enter 3 element:34
enter 4 element:45
enter 5 element:56
your array is
12 23 34 45 56
enter the element you want at the end:67
after inserting the element at the end array becomes
12 23 34 45 56 67
PS C:\Users\chuna>

```

PROGRAM:**(AT ANY POSITION)**

```
#include <iostream>

using namespace std;

int main()
{
    int ar[100],n,i,num;

    cout<<"enter the no. of element you want in array:";

    cin>>n;

    cout<<"entering element in array \n";

    for(i=0;i<n;i++)
    {
        cout<<"enter element:";

        cin>>ar[i];
    }

    cout<<"displaying the array\n";

    for(i=0;i<n;i++)
    {
        cout<<ar[i]<<"\t";
    }

    // to insert element at specific location

    int pos;

    cout<<"\nenter the position of element you want to insert:";

    cin>>pos;

    for(i=n;i>=0;i--)
    {
        ar[i+1]=ar[i];
    }
```

```

n++;

cout<<"\nenter the element :";

cin>>num;

ar[pos-1 ]=num;

cout<<"after inserting the element at position :\n";

for(i=0;i<n;i++)

{

    cout<<ar[i]<<"\t";

}

}

```

OUTPUT

```

File Edit Selection View Go Run Terminal Help
EXPLORER
CHUNA
  abc.c
  abc.exe
  ar.cpp
  arr.cpp
  array.c
  array.exe
  bin.cpp
  hello.c
  hello.exe
  hii.c
  hii.c++
  hl.cpp
  hl.exe
  insert.cpp
  insrtbeg.cpp
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
enter element:5
PS C:\Users\chuna> g++ insert.cpp
PS C:\Users\chuna> ./a.exe
enter the no. of element you want in array:5
entering element in array
enter element:13
enter element:61
enter element:34
enter element:16
enter element:25
displaying the array
13    61    34    16    25
enter the position of element you want to insert:2

enter the element :65
after inserting the element at position :
13    65    61    34    16    25
PS C:\Users\chuna>

```

PROGRAM:

(DELETION AT BEGINING)

```

# include <iostream>

using namespace std;

int main()

{

    int ar[100],n,i;

```

```
cout<<"enter the no. of elements you want to insert:";
```

```
cin>>n;
```

```
for(i=0;i<n;i++)
```

```
{
```

```
    cout<< "enter element:";
```

```
    cin>>ar[i];
```

```
}
```

```
cout<<"your array is:";
```

```
for(i=0;i<n;i++)
```

```
{
```

```
    cout<<ar[i]<<" ";
```

```
}
```

```
int pos=0;
```

```
for(i=0;i<n-1;i++)
```

```
{
```

```
    ar[i]=ar[i+1];
```

```
}
```

```
n--;
```

```
cout<<"\nafter deleting 1st element your array is\n";
```

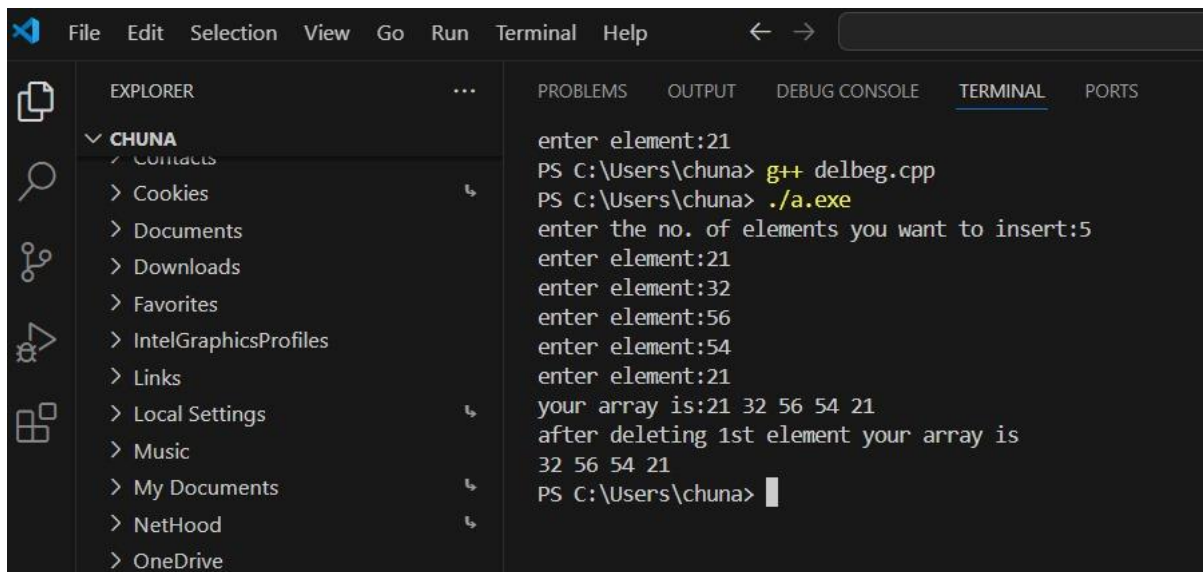
```
for(i=0;i<n;i++)
```

```
{
```

```
    cout<<ar[i]<<" ";
```

```
}
```

```
}
```

OUTPUT


```

File Edit Selection View Go Run Terminal Help
EXPLORER
CHUNA
  Contacts
  Cookies
  Documents
  Downloads
  Favorites
  IntelGraphicsProfiles
  Links
  Local Settings
  Music
  My Documents
  NetHood
  OneDrive

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

enter element:21
PS C:\Users\chuna> g++ delbeg.cpp
PS C:\Users\chuna> ./a.exe
enter the no. of elements you want to insert:5
enter element:21
enter element:32
enter element:56
enter element:54
enter element:21
your array is:21 32 56 54 21
after deleting 1st element your array is
32 56 54 21
PS C:\Users\chuna>

```

PROGRAM:**(DELETION AT END)**

```

#include <iostream>
using namespace std;
int main()
{
    int ar[100],n,i;
    cout<<"enter the no. of elements you want to insert:";
    cin>>n;

    for(i=0;i<n;i++)
    {
        cout<< "enter element:";
        cin>>ar[i];
    }

    cout<<"your array is:";
    for(i=0;i<n;i++)
    {

```

```

    cout<<ar[i]<<" ";
}

n--;

cout<<"\nafter deleting elemnet your array is\n";

for(i=0;i<n;i++)
{
    cout<<ar[i]<<" ";
}

}

```

OUTPUT

```

PS C:\Users\chuna> g++ delend.cpp
PS C:\Users\chuna> ./a.exe
enter the no. of elements you want to insert:5
enter element:31
enter element:46
enter element:36
enter element:14
enter element:52
your array is:31 46 36 14 52
after deleting elemnet your array is
31 46 36 14
PS C:\Users\chuna>

```

PROGRAM:**(DELETION AT ANY POSITION)**

```

#include <iostream>

using namespace std;

int main()
{
    int ar[100],n,i;

    cout<<"enter the no. of elements you want to insert:";

    cin>>n;

```



```
for(i=0;i<n;i++)
```

```
{
```

```
    cout<< "enter element:";
```

```
    cin>>ar[i];
```

```
}
```

```
cout<<"below is your array:";
```

```
for(i=0;i<n;i++)
```

```
{
```

```
    cout<<ar[i]<<" ";
```

```
}
```

```
int pos;
```

```
cout<<"\nenter the position of the array you want to delete:";
```

```
cin>>pos;
```

```
int p;
```

```
p=pos+1;
```

```
for(i=pos-1;i<n-1;i++)
```

```
{
```

```
    ar[i]=ar[i+1];
```

```
}
```

```
n--;
```

```
cout<<"after deleting elemnet your array is\n";
```

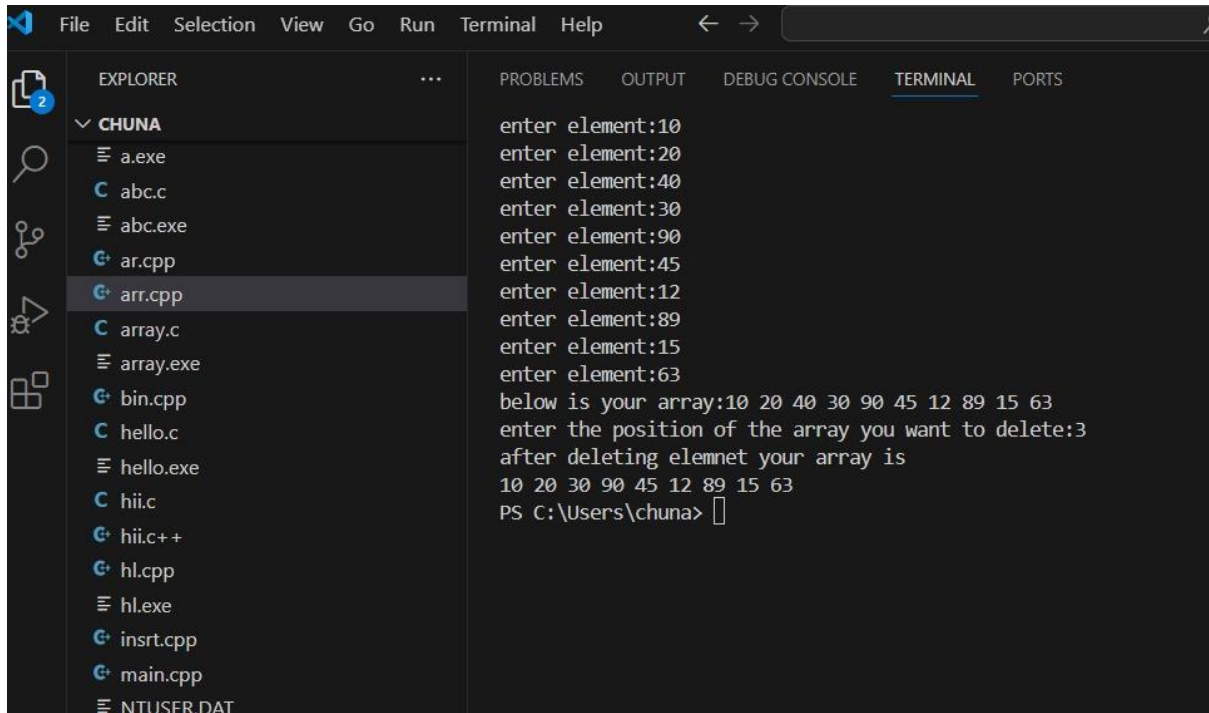
```
for(i=0;i<n;i++)
```

```
{
```

```
    cout<<ar[i]<<" ";
```

```
}
```

}

OUTPUT

```
File Edit Selection View Go Run Terminal Help
EXPLORER
CHUNA
  a.exe
  abc.c
  abc.exe
  ar.cpp
  arr.cpp
  array.c
  array.exe
  bin.cpp
  hello.c
  hello.exe
  hii.c
  hii.c++
  hl.cpp
  hl.exe
  insrt.cpp
  main.cpp
  NTUSER.DAT

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
enter element:10
enter element:20
enter element:40
enter element:30
enter element:90
enter element:45
enter element:12
enter element:89
enter element:15
enter element:63
below is your array:10 20 40 30 90 45 12 89 15 63
enter the position of the array you want to delete:3
after deleting elemnet your array is
10 20 30 90 45 12 89 15 63
PS C:\Users\chuna>
```

GITHUB LINK GOR PRACTICAL:https://github.com/Nishikant-Chunarkar/DATA_STRUCTURE_PRACTICAL