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Date:-

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Class:- SYBCA

Batch:-

Practical 1 :- Implementation of Array operations Insertion, Deletion and Display.

```
#include<iostream.h>
#include<conio.h>
class array
{
int arr[10];
int item,pos,N,loc;
public:
void Insert();
void Delete();
void traverse();
void GetData();
void Search();
array()
{
N=0;
}
};
void array::GetData()
{
int n;
cout<<"Enter how many elements:(<10)";
cin>>n;
N=n;
cout<<"Enter"<<n<<"Elements: ";
for(int i=0;i<n;i++)
cin>>arr[i];
}
void array :: Insert()
{
cout<<"\nEnter the item to be inseted: ";
cin>>item;
cout<<"\nEnter the position:(<"<<N<<").";
cin>>pos;

for(int i=N-1;i>=pos-1;i--)
arr[i+1]=arr[i];

arr[pos-1]=item;
N=N+1;
}
```

```

void array::Delete()
{
    cout<<"\n Enter the position of the item to be deleted: ";
    cin>>pos;

    if(pos>N && pos<=0)
    {
        cout<<"\n Invalid Position ";
        return;
    }
    else
        item = arr[pos-1];
    for(int i=pos-1;i<N;i++)
        arr[i]=arr[i+1];

    cout<<"\n Deleted item is: "<<item;

    N=N-1;
}
void array::Search()
{ loc=-1;
    cout<<"\nEnter the item to be search: ";
    cin>>item;
    for(int i=0;i<N&&loc==-1;i++)
        if(arr[i]==item)
        {
            loc=i+1;
        }
    if(loc==-1)
        cout<<"\nItem is not present in the list";
    else
        cout<<"\nItem is present in the list at location"<<loc<<". ";
}

void array::traverse()
{
    cout<<"\nList of items in the list: \n";
    for(int i=0;i<N;i++)
        cout<<"\t"<<arr[i];
}
void main()
{
    clrscr();
    array obj;
    obj.GetData();
    int ch;
    do

```

```

{
    cout<<"\n*****MENU*****\n1.Insert\n2.Delete\n3.Traverse\n4.Search\n5.Exit";
    cout<<"\nEnter Your Choice: ";
    cin>>ch;

    switch(ch)
    {
        case 1:obj.Insert();break;
        case 2:obj.Delete();break;
        case 3:obj.traverse();break;
        case 4:obj.Search();break;;
        case 5:break;
        default:cout<<"\nINVALID CHOICE";
    }
}
while(ch!=5);
getch();
}

```

OUTPUT:-

Enter how many elements: (<10)5

Enter5Elements: 45 32 3 90 100

*****MENU*****

1. Insert
- 2.Delete
3. Traverse
- 4.Search
- 5.Exit

Enter Your Choice: 1

Enter the item to be inseted: 56

Enter the position:(<5).3

*****MENU*****

1. Insert
- 2.Delete
3. Traverse
- 4.Search
- 5.Exit

Enter Your Choice:

Enter how many elements: (<10)5

Enter5Elements: 45 32 3 90 100

*****MENU*****

1. Insert
- 2.Delete
3. Traverse
- 4.Search

5.Exit

Enter Your Choice: 1

Enter the item to be inseted: 56

Enter the position:(<5).3

*****MENU*****

1. Insert

2.Delete

3. Traverse

4.Search

5.Exit

Enter Your Choice: 3

List of items in the list:

45 35 3 90 100

*****MENU*****

1. Insert

2.Delete

3. Traverse

4.Search

5.Exi

Enter Your Choice: 2

Enter the position of the item to be deleted: 4

Deleted item is: 3

*****MENU*****

1. Insert

2.Delete

3. Traverse

4.Search

5.Exit

Enter Your Choice: 3_

List of items in the list:

45 32 56 90 100

*****MENU*****

1. Insert

2.Delete

3. Traverse

4.Search

5.Exit

Enter Your Choice: 4

Enter the item to be search:-90
Item is present in the list at location4.

*****MENU*****

1. Insert
- 2.Delete
3. Traverse
- 4.Search
- 5.Exit

Enter Your Choice:5