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SE-C Comp, Viit, Pune

CODE:

```
#include<iostream>
using namespace std;
/*
 * @Rajvaibhav Rahane
 *
 */
void printMenu(){
    cout<<"1)Print Array\t";
    cout<<"2)Print Sum of Elements\n";
    cout<<"3)Delete Element at Position\t";
    cout<<"4)Exit\n";
    cout<<"Choice : ";
}
int calculateSumOfElements(const int *arr,int length){ //return sum of elements
    int sum=0;
    for(int i=0;i<length;i++){
        sum+=*(arr+i);
    }
    return sum;
}
void printArray(const int *arr,int length){           //print array
    int i;
    for(int i=0;i<length;i++){
        cout<<*(arr+i)<<" ";
    }
    cout<<endl;
}
void removeElement(int *arr,int *length,int index){ //remove an element at specified index
    if(index<0 || index>=*length)                  //array out of bounds
        cout<<"Invalid index\n";
    else{
        for(int i=index+1;i<*length;i++){ //move elements up by one
            *(arr+(i-1))=*(arr+i);
        }
        (*length)--;                               //decrement length by one
    }
}
int main(){
    int length,choice,position;
    cout<<"Enter size of array and its elements\t";
    cin>>length;
    int arr[length];
    for(int i=0;i<length;i++){
        cin>>arr[i];
    }
    do{
        printMenu();cin>>choice;
        switch(choice){
            case 1:{
                printArray(arr,length);break;
            }
            case 2:{
                cout<<calculateSumOfElements(arr,length)<<endl;break;
            }
        }
    }
}
```

```

        case 3:{
            cout<<"Index(0 Based):";
            cin>>position;
            removeElement(arr,&length,position);break;
        }
        case 4:{break;}
        default:{cout<<"Invalid Input.Try Again\n";}
    }
}while(choice!=4);
return 0;
}

```

Output:

```

rajrahane@visraj-lenovo-g500: ~/Desktop/c++/Lab1/F05
[1]+  Stopped                  ./sdi_assi_array
rajrahane@visraj-lenovo-g500:~/Desktop/c++/Lab1/F05$ clear
rajrahane@visraj-lenovo-g500:~/Desktop/c++/Lab1/F05$ g++ -o sdi_assi_array sdi_assi_array.cpp
rajrahane@visraj-lenovo-g500:~/Desktop/c++/Lab1/F05$ ./sdi_assi_array
Enter size of array and its elements      5 41 42 43 44 45
1)Print Array    2)Print Sum of Elements
3)Delete Element at Position    4)Exit
Choice : 1
41 42 43 44 45
1)Print Array    2)Print Sum of Elements
3)Delete Element at Position    4)Exit
Choice : 2
215
1)Print Array    2)Print Sum of Elements
3)Delete Element at Position    4)Exit
Choice : 3
Index(0 Based):4
1)Print Array    2)Print Sum of Elements
3)Delete Element at Position    4)Exit
Choice : 3
Index(0 Based):0
1)Print Array    2)Print Sum of Elements
3)Delete Element at Position    4)Exit
Choice : 1
42 43 44
1)Print Array    2)Print Sum of Elements
3)Delete Element at Position    4)Exit
Choice : 2
129
1)Print Array    2)Print Sum of Elements
3)Delete Element at Position    4)Exit
Choice : 3
Index(0 Based):1
1)Print Array    2)Print Sum of Elements
3)Delete Element at Position    4)Exit
Choice : 1
42 44
1)Print Array    2)Print Sum of Elements
3)Delete Element at Position    4)Exit
Choice : 4
rajrahane@visraj-lenovo-g500:~/Desktop/c++/Lab1/F05$

```