



OBJECT ORIENTED PROGRAMMING

LAB # 1

ASSIGNMENT

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ROLL NO. : 22K-4638

CLASS: 2-F

Question # 01:

Display Sum and Average of Array Elements Using for Loop.

CODE:

```
//22k-4638: class: 2-f
#include<iostream>
#include<stdlib.h>
using namespace std;
int main() {
    int n;
    cout<<"enter how many elements you want"<<endl;
    cin >> n;
    int arr[n];

    int i, sum=0;

    float avg;

    cout<<"enter the elements: "<<endl;
    for(i=0;i<n;i++){
        cin>>arr[i];
    }
    for(i=0;i<n;i++){
        sum+=arr[i];
    }

    avg=(float)sum/n;

    cout<<"sum of array element is: "<<sum<<" and average of array element is:
"<<avg<<endl;
    return 0;
}
```

OUTPUT:

```
enter how many elements you want
4
enter the elements:
1 3 4 2
sum of array element is: 10 and average of array element is: 2.5
```

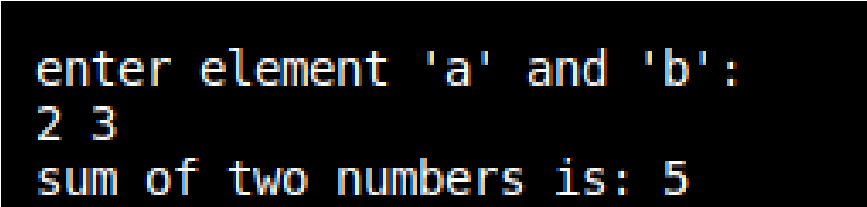
Question # 02:

Write C++ program to add two numbers using pointers

CODE:

```
//22k-4638: class:2-f
#include<iostream>
using namespace std;
int main() {
    int a, b;
    int* p = &a, * q = &b;
    cout<<"enter element 'a' and 'b': "<<endl;
    cin>> a >> b;

    cout << "sum of two numbers is: " << *p + *q<<endl;
    return 0;
}
```

OUTPUT:

```
enter element 'a' and 'b':
2 3
sum of two numbers is: 5
```

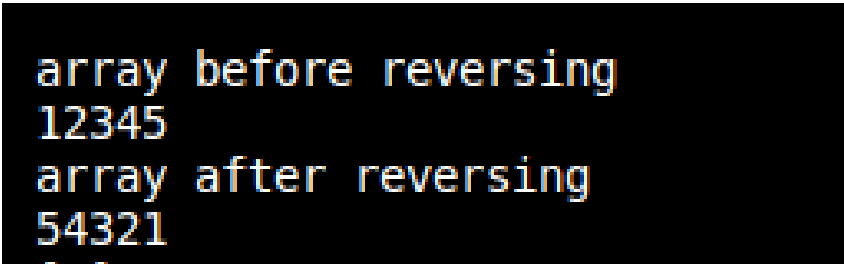
Question # 03:

Program to reverse an array using the pointer.

CODE:

//22k-4638: class: 2-f

```
#include<iostream>
using namespace std;
int main(){
int arr[]={1,2,3,4,5};
int *p=arr;
int i;
cout<<"array before reversing"<<endl;
for(i=0;i<5;i++)
{
cout<<*(p+i);
}
cout<<"\narray after reversing\n";
for(i=4;i>=0;i--)
{
cout<<*(p+i);
}
return 0;
}
```

OUTPUT:A screenshot of a terminal window with a black background and white text. The output shows the array [1, 2, 3, 4, 5] before reversal and [5, 4, 3, 2, 1] after reversal.

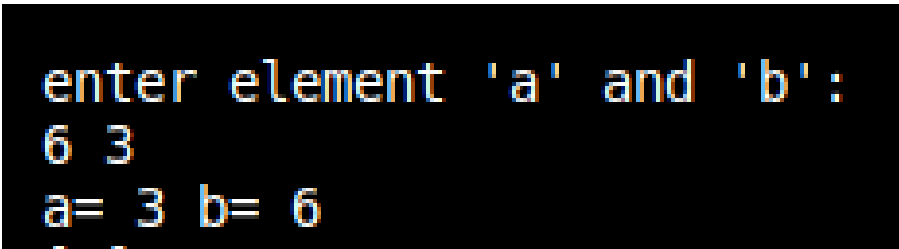
```
array before reversing
12345
array after reversing
54321
```

Question # 04:

Write a program that swaps the value of two variables using pointers.

CODE:

```
//22k-4638: class:2-f
#include<iostream>
using namespace std;
int main() {
int a, b;
int* p = &a, * q = &b;
cout<<"enter element 'a' and 'b': "<<endl;
cin>> a >> b;
int *temp=*&p;
*(&p)=*(&q);
*(&q)=*(&temp);
cout << "a= " <<*p<< "b= " <<*q<<endl;
return 0;
}
```

OUTPUT:

```
enter element 'a' and 'b':
6 3
a= 3 b= 6
```


Question # 06:

Write a C++ program to find the highest number in a given array.

CODE:

```
//22k-4638: class:2-f
#include<iostream>
using namespace std;
int main(){
int n,i,max=0;
cout<<"enter number of element you want to store in array: "<<endl;
cin>>n;
int arr[n];
for(i=0; i<n;i++){
cin>>arr[i];
}
for(i=0; i<n;i++){
if(arr[i]>max){
max=arr[i];
}
}
cout<<"max number in array is: "<<max<<endl;
return 0;
}
```

OUTPUT:

```
enter number of element you want to store in array:
5
enter the numbers:
2
36
8
4
2
max number in array is: 36
```