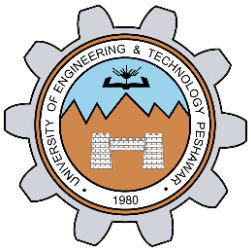
“PROGRAMING TASKS”

LAB # 9



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CSE102L Computer Programming Lab

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“On my honor, as student of University of Engineering and Technology, I have neither given nor received unauthorized assistance on this academic work.”

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1. Write a C++ program where you make an array of 10 elements, user will enter values in the array and after entering you must display them. Entering the values and displaying the values must be done using a single pointer

```
#include<iostream>
using namespace std;
main(){
int arry[10];
int *ptr;
cout<<"Enter 10 element array .."<<endl;
for (int i=0; i<10; i++)
{
    cin>>*(arry+i);
}
cout<<"Enter array is ..."<<endl;
 for (int i=0; i<10; i++)
 {
    cout<<*(arry+i)<<" \t ";
 }
 return 0;
}
```

2. Write a program to input twelve numbers from user using array and display all values on console (3 values in a row) (use separate loops for input and output operation). Use pointers to input values into the array and use pointer for outputting the values.

SAMPLE OUTPUT:

Value 1=?? Value 2=?? Value 3=??

Value 4=?? Value 5=?? Value 6=??

Value 7=?? Value 8=?? Value 9=??

Value 10=?? Value 11=?? Value 12=??

```
#include<iostream>
using namespace std;
main(){

int arry[12];
int *ptr;
cout<<"Enter 12 element array .."<<endl;
for (int i=0; i<12; i++)
{
    cin>>*(arry+i);
}
```

```
cout<<"Enter array (three in line) is ..."<<endl;
 for (int i=0; i<3; i++) {
    cout<<*(arry+i)<<" \t ";
 }
cout<<endl;
 for (int i=3; i<6; i++) {
    cout<<*(arry+i)<<" \t ";
 }
cout<<endl;
 for (int i=6; i<9; i++) {
    cout<<*(arry+i)<<" \t ";
 }
 cout<<endl;
 for (int i=9; i<12; i++){
    cout<<*(arry+i)<<" \t ";
 }
 return 0;
}
```

3. Write a program where user inputs values in an array of 5 elements using pointers and add all the elements of the array using pointers and display the output.

```
#include<iostream>
using namespace std;
main(){
int arry[5];
int *ptr;
int sumarry=0;
cout<<"Enter 5 element array .."<<endl;
for (int i=0; i<5; i++){
    cin>>*(arry+i);
}
cout<<"The sum of Enter array is ..."<<endl;
 for (int i=0; i<5; i++){
    sumarry=sumarry+*(arry+i);
 }
 cout<<sumarry;
 return 0;
}
```

4. Write a program which calculates the average of an array of 5 elements (hard code the elements) the average should be calculated in a function called average(), this function will accept 1 pointer (array must be passed here) and 1 integer (which is the size of array) i.e average(int *arr , int size).

```
#include<iostream>
using namespace std;
int averg(int *, int);
int main (){

   int arry [5]={2,4,6,8,10};
   int x;

   averg(arry,x);
   return 0;
}
int averg(int *arry,int siz){
   int sum =0;
   for (int i=0; i<5; i++)
   {
```

```
      sum=*(arry+i)+sum;
   }

  cout<<sum/5;
}
```

5. Write a C++ program where you make an array of 5 elements and ask user to input the values the values must be insert into the array using a pointer and then ask the user to enter two separate integer in separate variables the two integers will indicate the element locations of the arrays add the values stored on the locations using a function. Thefunction must except pointers as arguments.

```
#include<iostream>
using namespace std;
int addarryelement(int *,int ,int);

int main(){

  int arry[5];
  int loc1,loc2;
  cout<<"Enter 5 element array :\n";
```

```
  for (int i=0; i<5; i++){
   cin>>*(arry+i);
  }
  cout<<"Enter location of an element "<<endl;
  cin>>loc1;
  cout<<"Enter location of another an element "<<endl;
  cin>>loc2;
       cout<<"THE SUM OF TWO ELEMENT IS :";
  addarryelement(arry,loc1,loc2);


}

int addarryelement(int *x,int loc1,int loc2){

    cout<<*(x+(loc1-1))+*(x+(loc2-1));

}
```

6. Write a C++ program where you create 4 functions (additions, subtraction, division, multiplication) and a 5 th function called calculator() the calculator will have two integers and a pointer to function as a input. So for example if you execute int x = calculator(4,5,addition); in main() x value will become 9. x,y,string

```
#include<iostream>
using namespace std;
int add(int, int);
int sub(int, int);
int multi(int, int);
int divi(int,int);
int calculator(int ,int ,int(*)(int ,int));

main(){

int x ,y,a;

cout<<"Enter two values :"<<endl;
cin>>x>>y;
```

```
cout<<"Value after executing a function : ";
a=calculator(x,y,multi);

    //3rd function will executed(multiplication of two number)//
cout<<a;

}
int calculator(int x,int y, int(*func)(int ,int )){

return (*func)(x,y);

}
int add(int a, int b){
return a+b;
}
int multi(int c,int b){
return c*b;
}
int divi(int c,int b){
return c/b;
}
```