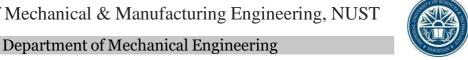
## School Of Mechanical & Manufacturing Engineering, NUST



# CS-114 - Fundamental of **Programing**

# Lab Tasks 8

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#### Department of Mechanical Engineering

#### LAB TASK 1:

1. Generate the Fibonacci sequence using nested loops.

#### **Code:**

```
#include <iostream>
using namespace std;
int main()
//
         LAB TASK 1
         int l; //array length
         float sum; //sum of all elements
         cout<<"Please enter the array length"<<endl;</pre>
         cin>>l;
         int a[1];
         cout<<"Please enter array elements"<<endl;</pre>
         for(int i=0; i<1; i+=1){cin>>a[i];}
         for(int j=0; j<1; j+=1){sum = sum + a[j];}
         cout<<"The average of all these elements is: "<<sum/l<<endl;</pre>
         return 0;
}
```

#### **Result:**

```
Please enter the array length

Please enter array elements

Here are array elements

Please enter array elements

Here array elements
```

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#### LAB TASK 2:

2. Create Floyd's triangle with nested loops.

#### **Code:**

```
#include <iostream>
using namespace std;
int main()
{
//
          LAB TASK 2
           int a[5];
          int bub[5];
           int p = 4;
           cout<<"Input the elements: "<<endl;</pre>
           for(int i=0; i<5; i+=1){
           cin>>a[i];}
           cout<<"The given array is: {";</pre>
           for(int c=0; c<5; c+=1){
           cout<<a[c]<<' ';}
           cout<<"}";
           for(int z=0; z<5; z+=1){
                  for(int j=0; j<5; j+=1){
                                     if(a[j]>=a[0] \&\& a[j]>=a[1] \&\& a[j]>=a[2] \&\& a[j]>=a[3] \&\& a[j]>=a[4])
                           bub[p]=a[j]; a[j]=0; p=p-1;}
                  else{continue;}
                  if(a[0]==0 \&\& a[1]==0 \&\& a[2]==0 \&\& a[3]==0 \&\& a[4]==0)\{break;\}
                  }
           }
           cout<<"The bubble sorted array is: {";</pre>
           for(int b=0; b<5; b+=1){
           cout<<bub[b]<<' ';}
           cout<<"}";
           return 0;
}
```

#### **Result:**

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#### LAB TASK 3:

3. Write a program using break or continue statement that only adds prime numbers from 1 to 50 and display the sum on screen.

#### **Code:**

```
#include <iostream>
using namespace std;
int main()
{
//
          LAB TASK 3
           int u[5];
           int min=0;
           cout<<"Input the elements: "<<endl;</pre>
           for(int i=0; i<5; i+=1){cin>>u[i];}
           cout<<"The given array is: {";</pre>
           for(int j=0; j<5; j+=1){cout<<u[j]<<'';}
           cout<<"}"<<endl;;
           min=u[0];
           for(int i=0;i<5;i++){
           min=u[i];
           for(int j=i; j<5; j++){
                  if (\min > u[i]){
                            min = u[j];
                            u[j]=u[i];
                            u[i]=min;
                   }
           }
           cout<<"The selection sorted array is: {";</pre>
           for(int b=0; b<5; b+=1){cout<<u[b]<<' ';}
           cout<<"}"<<endl;
           return 0;
}
```

#### **Result:**

```
Input the elements:
5
39
23
8
32
The given array is: {5 39 23 8 32 }
The selection sorted array is: {5 8 23 32 39 }
------
Process exited after 5.538 seconds with return value 0
Press any key to continue . . .
```