

CS & Programming Lab

Lab Manual 04

Name: Abdullah Jamil Tung

Class: ME-15-Sec-A

Roll #: 478459

Home Task #1

/*1. Write a program in C++ that prints the numbers from 1 to 150 except the multiples of 10.

Make use of the continue statement.*/

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    for (int x=1; x<=150; x++){
```

```
        if (x % 10 != 0)
```

```
            cout<<x<<" ";}
```

```
}
```

```

1  /*1. Write a program in C++ that prints the numbers from 1 to 150 except the multiples of 10.
2  Make use of the continue statement.*/
3
4
5  #include <iostream>
6  using namespace std;
7
8  int main()
9  {
10     for (int x=1; x<=150; x++){
11
12         if (x % 10 != 0)
13             cout<<x<<" ";
14     }

```

```

C:\Users\SA\Documents\Home Task 1-5.exe
1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 31, 32, 33, 34, 35, 36, 37, 38, 39, 41, 42, 43, 44, 45, 46, 47, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58, 59, 61, 62, 63, 64, 65, 66, 67, 68, 69, 71, 72, 73, 74, 75, 76, 77, 78, 79, 81, 82, 83, 84, 85, 86, 87, 88, 89, 91, 92, 93, 94, 95, 96, 97, 98, 99, 101, 102, 103, 104, 105, 106, 107, 108, 109, 111, 112, 113, 114, 115, 116, 117, 118, 119, 121, 122, 123, 124, 125, 126, 127, 128, 129, 131, 132, 133, 134, 135, 136, 137, 138, 139, 141, 142, 143, 144, 145, 146, 147, 148, 149,
-----
Process exited after 0.1702 seconds with return value 0
Press any key to continue . . .

```

Home Task #2

/*2. Write a C++ program to find the sum of digits of a number.

The sum of digits means adding all the digits of any number, for example, we take any number like 358. Its sum of all digits is $3+5+8=16$.*/

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    //Defining variables and taking inputs
```

```
    int num, num1, num2, num3;
```

```
    cout<<"Enter any three digit number value = ";
```

```
    cin>>num;
```

```
    cout<<endl;
```

```
    //Splitting the number into digits and giving the sum output
```

```
    num3 = num%10;
```

```

    num2 = ((num - num3)/10) % 10;

    num1 = (num - ((num2 * 10) + num1)) / 100;

    cout<<"The sum of the three digits = "<<num1 + num2 +
num3<<endl;

}

```

```

1  /*2.   Write a C++ program to find the sum of digits of a number.
2  The sum of digits means adding all the digits of any number, for example, we take any number like 358. Its sum of all digits is 3+5+8=16.*/
3
4
5  #include <iostream>
6  using namespace std;
7
8  int main()
9  {
10     //Defining variables and taking inputs
11     int num, num1, num2, num3;
12     cout<<"Enter any three digit number value = ";
13     cin>>num;
14     cout<<endl;
15
16     //Splitting the number into digits and giving the sum output
17     num3 = num%10;
18     num2 = ((num - num3)/10) % 10;
19     num1 = (num - ((num2 * 10) + num1)) / 100;
20     cout<<"The sum of the three digits = "<<num1 + num2 + num3<<endl;
21 }

```

```

C:\Users\SA\Documents\Home Task 2-5.
Enter any three digit number value = 786
The sum of the three digits = 21
-----
Process exited after 14.75 seconds with return value 0
Press any key to continue . . .

```

Home Task #3

/*3. Write a program in C++ to check whether a number is prime or not.*/

```
#include <iostream>
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    int num;
```

```
    cout<<"Enter the number value = ";
```

```
    cin>>num;
```

```
    cout<<endl;
```

```
    bool check = true;
```

```
    if (num<=1)
```

```
    { check = false;}
```

```
for (int x = 2; x <= num/2; x++){  
  
    if ( num % x == 0)  
    {check = false;}  
    break;}  
  
    if (check)  
    cout<<"It is a prime number."<<endl;  
  
    else  
    cout<<"It is a composite number."<<endl;  
}
```

```

1  /*3.   Write a program in C++ to check whether a number is prime or not.*/
2
3
4  #include <iostream>
5  using namespace std;
6
7  int main()
8  {
9      int num;
10     cout<<"Enter the number value = ";
11     cin>>num;
12     cout<<endl;
13
14     bool check = true;
15
16     if (num<=1)
17     {check = false;}
18
19     for (int x = 2; x <= num/2; x++){
20
21         if ( num % x == 0)
22         {check = false;}
23         break;}
24
25     if (check)
26     cout<<"It is a prime number."<<endl;
27
28     else
29     cout<<"It is a composite number."<<endl;
30 }

```

```

C:\Users\SA\Documents\Home Task 3-5.exe
Enter the number value = 37
It is a prime number.
-----
Process exited after 8.286 seconds with return value 0
Press any key to continue . . .

```

```

C:\Users\SA\Documents\Home Task 3-5.exe
Enter the number value = 50
It is a composite number.
-----
Process exited after 13.19 seconds with return value 0
Press any key to continue . . .

```