

# Fundamentals of Programming

## HOME TASK MANUAL 4

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<b>DATE</b>	<b>26/10/2023</b>

# Task 1

```
#include<iostream>
using namespace std;
int main()
{
    int x,y;
    for(x=0;x<150;x++)
    {
        y=x+1;
        if(y%10!=0)
        {
            cout<<y<<" ";

        }
        else
        {
            //do nothing
        }
    }
    return 0;
}
```

C:\Users\arbab\Documents\TASK\task4.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 0.1899 seconds with return value 0  
Press any key to continue . . .

## Task 2

```
#include<iostream>
using namespace std;
int main()
{
    int num,sum(0),res;
    cout<<"Enter the value of number:";
    cin>>num;
    while(res!=0){
        //if we take a number 456 ,it is divided by 10 and remainder 6 is stored in
result
        res=num%10;
        //then the result is added in sum which is 0 and sum of 0 and 6 is stored in
sum
        sum=sum+res;
        //then num (456) is divided by 10 and result(45) integer number is stored in
num
        num=num/10;
        //this process continues on until remainder is not zero
        //in first run sum is 6(0+6)
        //then sum is 11(6+5) and then 15(11+4)
    }
    cout<<"The value of sum of digit of a number is:"<<sum;
    return 0;
}
```


C:\Users\arbab\Documents\TASK\task 422.exe

```
Enter the value of number:4567
The value of sum of digit of a number is:22
-----
Process exited after 5.036 seconds with return value 0
Press any key to continue . . .
```

### Task 3

```
#include<iostream>
using namespace std;
int main()
{
    int num,x;
    //declare two variables num and x
    bool prime=true;
    // we assume that the number entered is a prime number and then check it
    cout<<"Enter the value of num";
    cin>>num;
    // entering the value of number which we want to check
    for(x=2;x<num;x++)
    {
        if(num%x==0)
        {
            //number is divided by x (2<=x<num) if remainder is zero it means number is
divisible by any other number (other than 1 and itself)
            //this mean number is not prime
            prime = false;
            //if number is not prime than bool change it value from true to false
            break;
            //if remainder comes 0 then break ends this loop
            //if it does not ends the loop it will give us wrong answer
        }

    }
    if(prime)
    {
        //if prime=true then this command is executed
        cout<<"The number is a prime number";
    }
    else
    {
        cout<<"The number is not a prime number";
    }
    return 0;
}
```

 C:\Users\arbab\Documents\TASK\task 4333.exe

Enter the value of num :11

The number is a prime number

-----

Process exited after 3.153 seconds with return value 0

Press any key to continue . . . 