Submitted by:

Burhan Baig

Referred to:

Sir. Muhammad Affan

Roll no:

460945

Fundamentals of Programming

Home task 6

Task 1

```cpp
#include <iostream>

using namespace std;

int main () {


int num;

cout<<"Enter the range of numbers you want to add: "; cin>>num;

int sum=0;

for (int i=2; i<=num;++i) {            //Outer loop that runs the amount of number of terms.

        bool isPrime=true;              //A boolean function that gives 1 or 0 value.

        for (int j=2; j<=i/2; ++j) {      //Inner loop that calculates the next prime number.

        if (i % j==0) {                 //Checks if the number is prime

        isPrime=false;                  //If the condition is fulfilled it means that the number is
not prime

        break;                          //Breaks the loop if condition is fulfilled

        }

        }

        if (isPrime) {                  //Checks for true or false

                sum= sum+i;              //Adds the next number (prime) to the first number

        }

}

cout<<"Sum of the first "<<num<<" prime numbers is: "<<sum;

return 0;

}
```

C:\Users\HC\Documents\Home task 6.exe

```
Enter the range of numbers you want to add: 50
Sum of the first 50 prime numbers is: 328
---------------------------------
```

Task 2

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

int rows;
cout<<"Enter the number of rows: "; cin>>rows;

for (int i=1; i<=rows; ++i) {     //Runs the loop for the amount of number of rows
        for (int j=1; j<=i; ++j){       //Adds +1 to the next number
                cout<<j<<" ";               //Prints out the next number

        }
        cout<<endl;                 //Prints the next row
}
return 0;
}
```
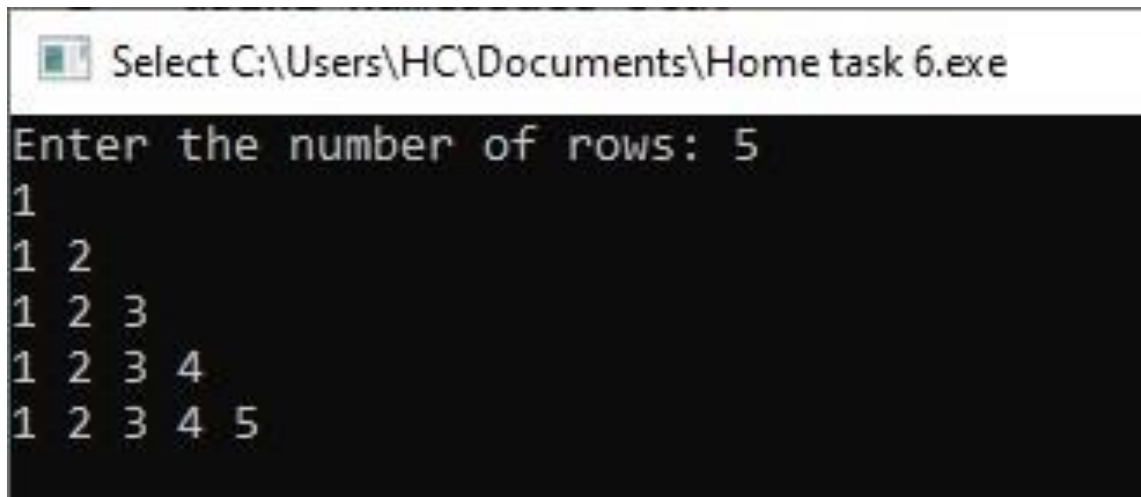
Select C:\Users\HC\Documents\Home task 6.exe

```
Enter the number of rows: 5
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

Task 3

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


int rows;
cout<<"Enter the number of rows: "; cin>>rows;


for (int i=1; i<=rows; ++i) {
        for (int j=1; j<=i*2; j++){          //Adds spaces of 2 to each row
                cout<<i*2<<" ";              //Adds +2 to the preceding term


        }
        cout<<endl;                          //Prints the same number for the amount of times said in
outer loop
}
return 0;
```

```
■ Select C:\Users\HC\Documents\Home task 6.exe

Enter the number of rows: 5
2 2
4 4 4 4
6 6 6 6 6 6
8 8 8 8 8 8 8 8
10 10 10 10 10 10 10 10 10 10
}
```