Fop Lab Home Task 6

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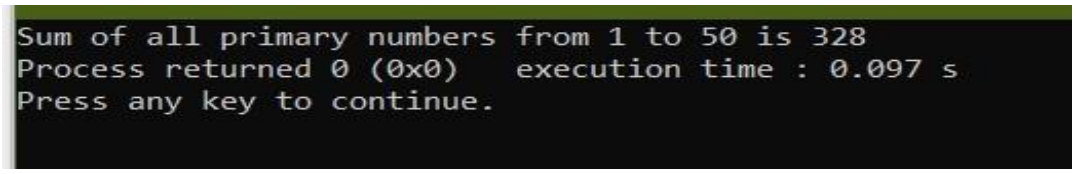
Section: B

TASK 1

```
#include <iostream>
using namespace std;
int main()
{
   int sum = 0;
   for (int i = 1; i<=50; i++) {
      int factors=0;

      for (int j = 1; j<=i; j++) {
         if (i%j==0) {
            factors++;
         }
      }

      if (factors == 2) {
         sum += i;
      }
      else {
         continue;
      }
   }
   cout<<"Sum of all primary numbers from 1 to 50 is "<<sum;
}
```

Output



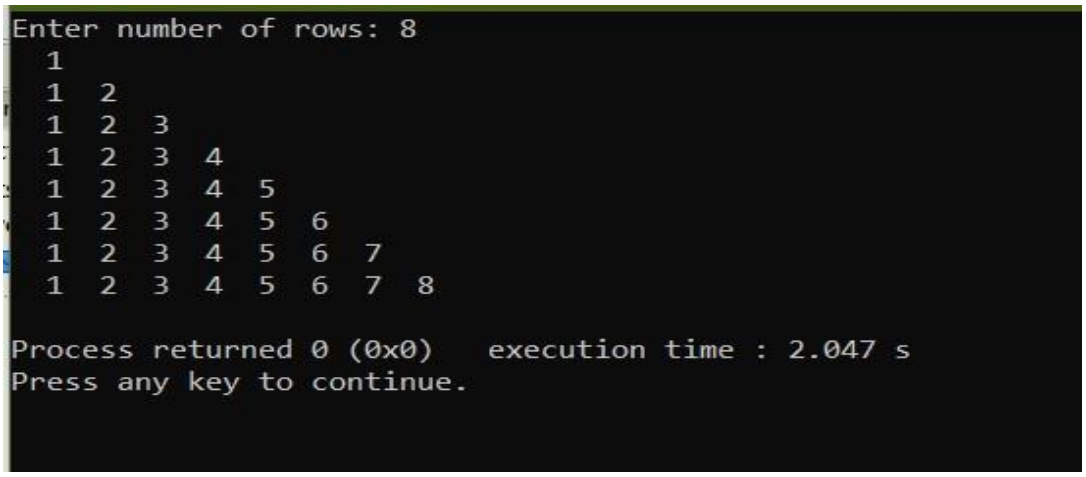
Explanation

This code runs a loop from 1 to 50 and calculate the factors of each number. If the factors of a number are 2, then the number is primary number. It also uses a continue statement to skip over non-primary numbers.The program then adds the primary number to a variable called sum. At the end of calculating the sum of all primary numbers, it prints out the sum.

TASK 2

```
#include <iostream>

using namespace std;


int main()

{

  int rows;

  cout<<"Enter number of rows: ";

  cin>>rows;


  for (int i = 1; i<=rows; i++) {

      for (int j = 1; j<=i; j++) {

         cout<<"  "<<j;

      }

      cout<<endl;

  }

}
```

Output



Explanation

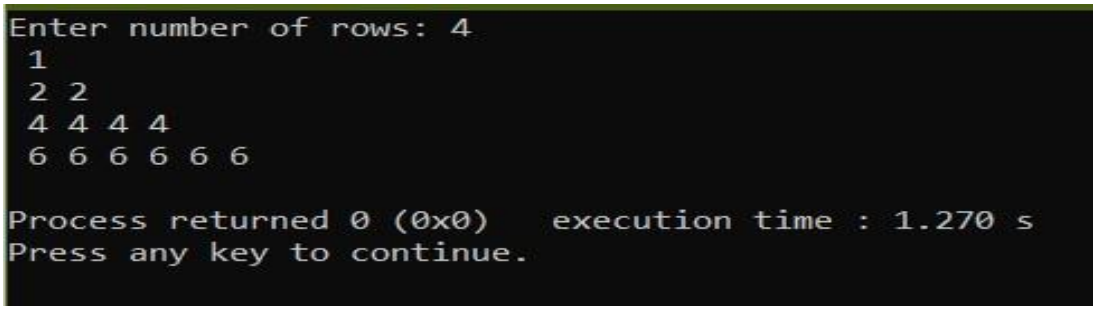
This code takes number of rows from the user and prints out a pattern of increasing numbers using nested for loops. Outer loop calculates the number of row and inner loop calculates the position of the digit.

TASK 3

```
#include <iostream>

using namespace std;


int main()

{

  int rows;

  cout<<"Enter number of rows: ";

  cin>>rows;


  cout<<" 1\n";

  for (int i = 1; i<=rows*2-1; i++) {

      if (i%2==1){

         continue;

      }

      for (int j = 1; j<=i; j++) {
```

```
        cout<<" "<<i;
      }
      cout<<endl;
  }
}
```

Output



Explanation

This code takes number of rows from the user. It uses continue statement to skip over odd numbers except 1 and it prints out n digits of value n for number n. For example it prints 4 digits of value 4 for number 4.