

Graded Lab 1

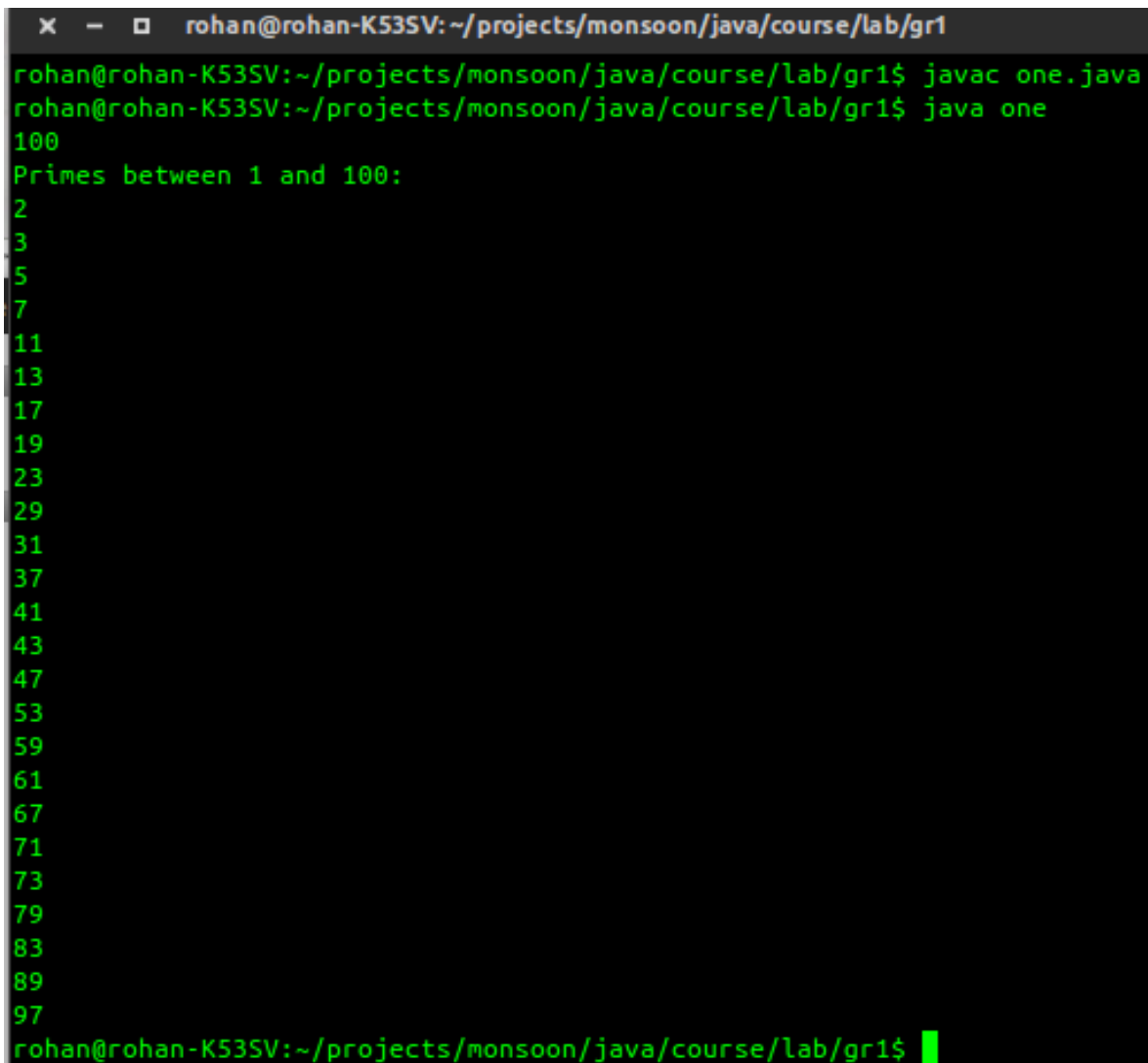
CSD 207
Shiv Nadar University

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Submitted By:

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```
/*  
Q1. Prime number generator  
Author: Rohan Verma (hello@rohanverma.net)
```



A terminal window with a dark background and green text. The window title is "rohan@rohan-K53SV: ~/projects/monsoon/java/course/lab/gr1". The user enters the command "javac one.java" and then "java one". The output shows the number "100" followed by the text "Primes between 1 and 100:" and a list of prime numbers: 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, and 97. The prompt "rohan@rohan-K53SV: ~/projects/monsoon/java/course/lab/gr1\$" is visible at the bottom.

```
rohan@rohan-K53SV:~/projects/monsoon/java/course/lab/gr1$ javac one.java  
rohan@rohan-K53SV:~/projects/monsoon/java/course/lab/gr1$ java one  
100  
Primes between 1 and 100:  
2  
3  
5  
7  
11  
13  
17  
19  
23  
29  
31  
37  
41  
43  
47  
53  
59  
61  
67  
71  
73  
79  
83  
89  
97  
rohan@rohan-K53SV:~/projects/monsoon/java/course/lab/gr1$
```

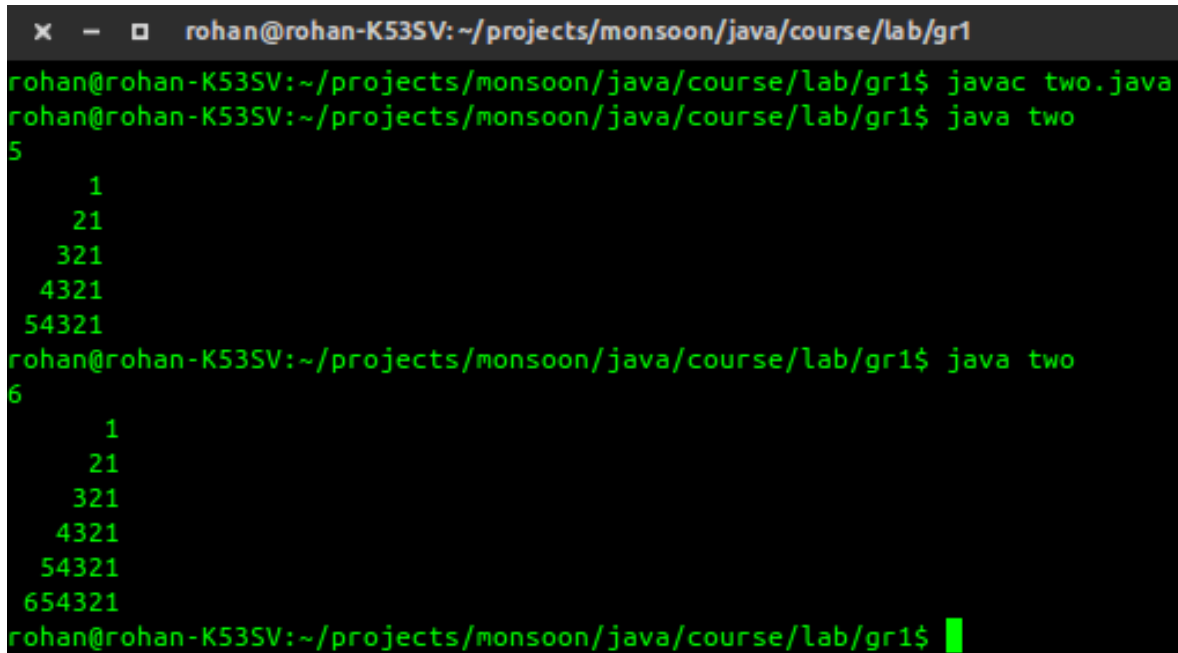
```
*/  
import java.util.Scanner;  
  
public class one {  
    public static int isPrime(int x){  
        for(int i = 2; i * i <= x; i++){  
            if(x % i == 0) return 0;  
        }  
    }  
}
```

```
    }  
    return 1;  
}  
  
public static void main( String [] args )  
{  
    int num;  
    Scanner s = new Scanner(System.in);  
    num = s.nextInt();  
    System.out.println("Primes between 1 and " + num + ": ");  
    for(int i = 2; i <= num; i++){  
        if(isPrime(i) == 1){  
            System.out.println(i);  
        }  
    }  
}
```

```
/*
```

Q2. Pyramid

Author: Rohan Verma (hello@rohanverma.net)



The screenshot shows a terminal window with the following content:

```
rohan@rohan-K53SV:~/projects/monsoon/java/course/lab/gr1$ javac two.java
rohan@rohan-K53SV:~/projects/monsoon/java/course/lab/gr1$ java two
5
  1
 21
321
4321
54321
rohan@rohan-K53SV:~/projects/monsoon/java/course/lab/gr1$ java two
6
  1
 21
321
4321
54321
654321
rohan@rohan-K53SV:~/projects/monsoon/java/course/lab/gr1$
```

```
*/
import java.util.Scanner;

public class two {
    public static void main( String [] args )
    {
        int num;

        Scanner s = new Scanner(System.in);

        num = s.nextInt();

        for(int i = 0; i < num; i++){
            for(int j = i; j < num; j++){
                System.out.print(" ");
            }
            for(int j = num - i - 1; j < num; j++){
                System.out.print(num - j);
            }
            System.out.print('\n');
        }
    }
}
```

/*
Q3. Leap years between 1901 and 2000

Author: Rohan Verma (hello@rohanverma.net)

```
x - rohan@rohan-K53SV:~/projects/monsoon/java/course/lab/gr1
rohan@rohan-K53SV:~/projects/monsoon/java/course/lab/gr1$ javac three.java
rohan@rohan-K53SV:~/projects/monsoon/java/course/lab/gr1$ java three
Leap years between 1901 to 2000
1904 1908 1912 1916 1920 1924 1928 1932 1936 1940 1944 1948
1952 1956 1960 1964 1968 1972 1976 1980 1984 1988 1992 1996
2000
rohan@rohan-K53SV:~/projects/monsoon/java/course/lab/gr1$
```

```
*/
import java.util.Scanner;
public class three {
    public static int isPrime(int x){
        for(int i = 2; i * i <= x; i++){
            if(x % i == 0) return 0;
        }
        return 1;
    }

    public static void main( String [] args )
    {

        int BEGIN = 1901, END = 2000, printed = 0;

        Scanner s = new Scanner(System.in);

        System.out.println("Leap years between 1901 to 2000 ");

        for(int i = BEGIN; i <= END; i++)
        {

            if ( i%400 == 0)
            {
                System.out.print(i + " ");
                printed++;
            }
            else if ( i%100 == 0)
            ;
            else if ( i%4 == 0 )
            {
                System.out.print(i + " ");
                printed++;
            }

            if(printed%12== 0 && printed != 0) {
                System.out.println();
                printed = 0;
            }

        }

        System.out.println();
    }
}
```