# CSA0979 Java programming

## Assignment –4

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**5)**

```
class PrimeExample implements Runnable {
    public void run() {
        int i, m = 20, flag;
        for (i = 1; i <= m; i++) {
            flag = 1;
            if (i <= 3) {
                System.out.println(i + " is prime number");
                continue;
            } else if (i > 3) {
                for (int j = 2; j <= i; j++) {
                    if (i % j == 0) {
                        flag = 0;
                        break;
                    }
                }
                if (flag != 1) {
                    System.out.println(i + " is not prime number");
                } else {
```

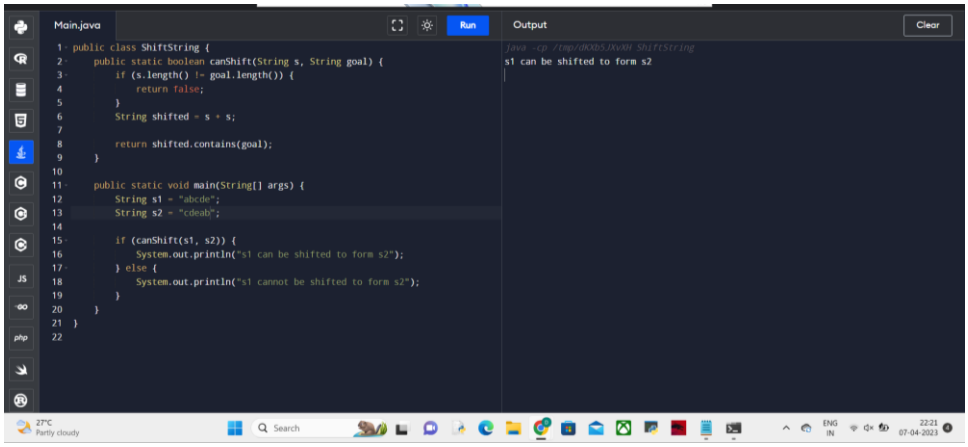
```
                System.out.println(i + " is prime number");
            }
        }
    }
}

class prime {
    public static void main(String args[]) {
        try {
            PrimeExample p1 = new PrimeExample();
            Thread t1 = new Thread(p1);
            t1.start();
        } catch (Exception e) {
            System.out.println(e.getMessage());
        }
    }
}
```

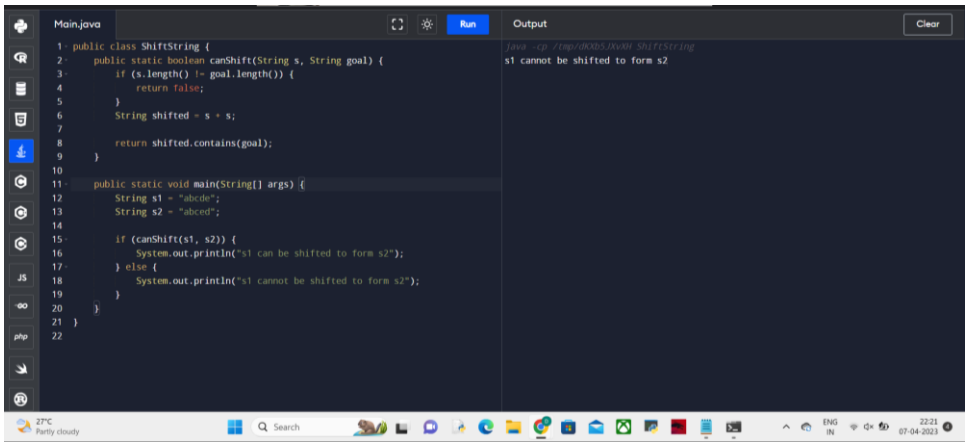
**4)**

```
public class ShiftString {
    public static boolean canShift(String s, String goal) {
        if (s.length() != goal.length()) {
            return false;
```

```
        }
        String shifted = s + s;

        return shifted.contains(goal);
    }

    public static void main(String[] args) {
        String s1 = "abcde";
        String s2 = "abced";

        if (canShift(s1, s2)) {
            System.out.println("s1 can be shifted to form s2");
        } else {
            System.out.println("s1 cannot be shifted to form s2");
        }
    }
}
```

**OUTPUT:**



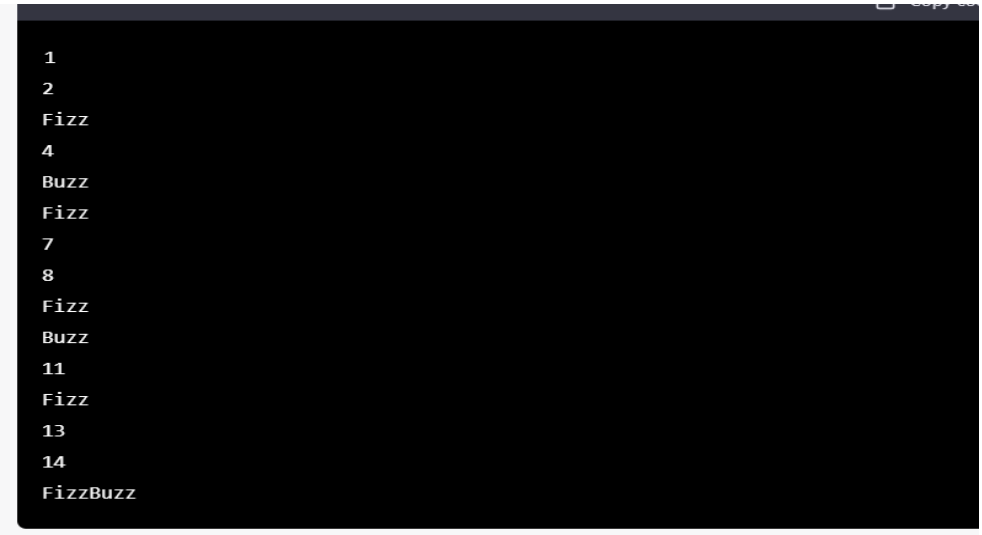




## 3)

```
public class FizzBuzz {
    public static String[] fizzBuzz(int n) {
        String[] answer = new String[n];

        for (int i = 1; i <= n; i++) {
            if (i % 3 == 0 && i % 5 == 0) {
                answer[i - 1] = "FizzBuzz";
            } else if (i % 3 == 0) {
                answer[i - 1] = "Fizz";
            } else if (i % 5 == 0) {
                answer[i - 1] = "Buzz";
            } else {
```

```
            answer[i - 1] = Integer.toString(i);
          }
        }

        return answer;
    }

    public static void main(String[] args) {
        int n = 15;
        String[] answer = fizzBuzz(n);

        for (String s : answer) {
            System.out.println(s);
        }
    }
}
```

## OUTPUT:




## 2)

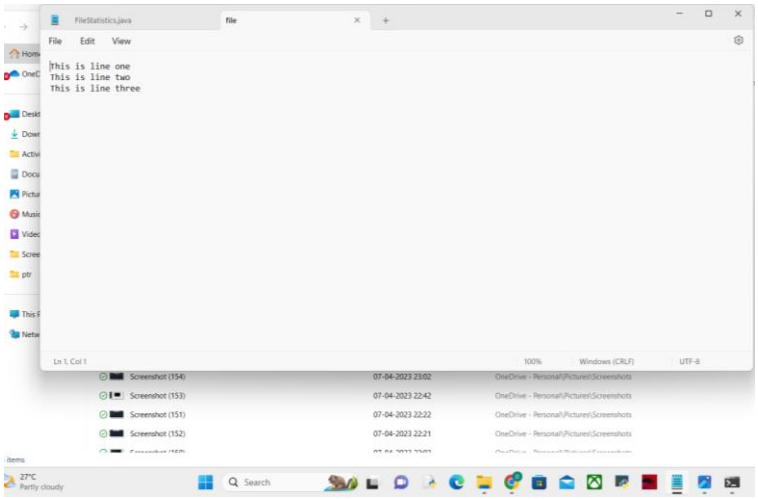
```
class Customer {
   private int AccountNo;
   private String AccName;
   private double Balance;

   public synchronized void deposit(double amount) {
      System.out.println("Depositing " + amount);
      Balance += amount;
      System.out.println("New balance is " + Balance);
      notify();
   }

   public synchronized void withdraw(double amount) throws
InterruptedException {
      System.out.println("Withdrawing " + amount);
      while (Balance < amount) {
         System.out.println("Insufficient balance. Waiting for deposit...");
         wait();
      }
      Balance -= amount;
      System.out.println("New balance is " + Balance);
   }
}

public class Main {
   public static void main(String[] args) {
      Customer c = new Customer();
```

```
        new Thread(() -> {
            try {
                c.withdraw(100);
            } catch (InterruptedException e) {
                e.printStackTrace();
            }
        }).start();

        new Thread(() -> {
            c.deposit(200);
        }).start();
    }
}
```

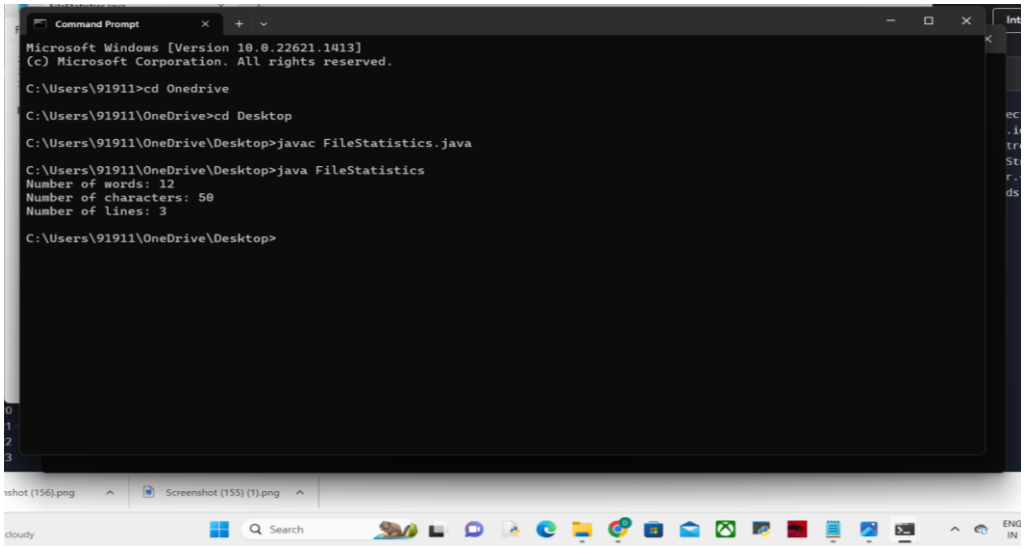
**1)**

```
import java.io.BufferedReader;
import java.io.FileReader;
import java.io.IOException;

public class FileStatistics {
    public static void main(String[] args) {
        String filename = "C:/Users/91911/OneDrive/Desktop/File.txt";
        int wordCount = 0;
        int charCount = 0;
        int lineCount = 0;

        try {
```

```
        BufferedReader reader = new BufferedReader(new
FileReader(filename));
        String line = reader.readLine();

        while (line != null) {
           lineCount++;
           charCount += line.length();

                    String[] words = line.split(" ");
           wordCount += words.length;

           line = reader.readLine();
        }

        reader.close();
     } catch (IOException e) {
        System.out.println("Error reading file: " + e.getMessage());
     }

     System.out.println("Number of words: " + wordCount);
     System.out.println("Number of characters: " + charCount);
     System.out.println("Number of lines: " + lineCount);
  }
```


FileStatistics.java
file
File Edit View
This is line one
This is line two
This is line three
Ln 1, Col 1
100%
Windows (CRLF)
UTF-8
Screenshot (154) 07-04-2023 23:02
Screenshot (153) 07-04-2023 22:42
Screenshot (151) 07-04-2023 22:22
Screenshot (152) 07-04-2023 22:21
Search

## OUTPUT:


Command Prompt
Microsoft Windows [Version 10.0.22621.1413]
(c) Microsoft Corporation. All rights reserved.
C:\Users\91911>cd Onedrive
C:\Users\91911\OneDrive>cd Desktop
C:\Users\91911\OneDrive\Desktop>javac FileStatistics.java
C:\Users\91911\OneDrive\Desktop>java FileStatistics
Number of words: 12
Number of characters: 50
Number of lines: 3
C:\Users\91911\OneDrive\Desktop>
Screenshot (155) (1).png
Search