CSA 0976 Java Programming

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Assignment 4

1.Code:

```
import java.io.*;
class FileStats
{
	public static void main(String[] args)
	{
	String fileName = "File1.txt";
	int wordCount = 0;
	int charCount = 0;
	int lineCount = 0;
	try (BufferedReader br = new BufferedReader(new
FileReader(fileName)))
		{
		String line;
		while ((line = br.readLine()) != null)
			{
			lineCount++;
			String[] words = line.split("\\s+");
			wordCount += words.length;
			charCount += line.length();
		}
	}
		catch (IOException e)
```

```
            {
            e.printStackTrace();
        }
        System.out.println("Word count: " + wordCount);
        System.out.println("Character count: " + charCount);
        System.out.println("Line count: " + lineCount);
        }
}
```

Output:

```
C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-4 Assignment>javac FileStats.java

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-4 Assignment>java FileStats
Word count: 6
Character count: 40
Line count: 3
```

2.Code:

```
import java.io.*;
class Customer
{
        private int accountNo;
        private String accName;
        private int balance;
        public Customer(int accountNo, String accName, int balance)
        {
        this.accountNo = accountNo;
        this.accName = accName;
        this.balance = balance;
        }
        public synchronized void deposit(int amount)
        {
```

```
        balance += amount;
        System.out.println("Amount " + amount + " deposited. New balance is "
+ balance);
        notify();
        }
        public synchronized void withdraw(int amount)
        {
        if (balance < amount)
                {
                System.out.println("Insufficient balance. Waiting for deposit...");
                try
                        {
                        wait();
                }
                        catch (InterruptedException e)
                        {
                        e.printStackTrace();
                }
        }
        balance -= amount;
        System.out.println("Amount " + amount + " withdrawn. New balance is "
+ balance);
        }
}
class Main
{
        public static void main(String[] args)
        {
```

```
        int i=12345;
        String s="Saran";
        int amount=1000;
    Customer customer = new Customer(i,s,amount);
        System.out.println("Account holder name :"+s);
        System.out.println("Account balance :"+amount);
    Thread withdrawThread = new Thread(() ->
{customer.withdraw(1100);});
    Thread depositThread = new Thread(() -> {customer.deposit(200);});
    withdrawThread.start();
    depositThread.start();
    }
}
```

Output:

```
C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-4 Assignment>javac bank.java

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-4 Assignment>java Main
Account holder name :Saran
Account balance :1000
Insufficient balance. Waiting for deposit...
Amount 200 deposited. New balance is 1200
Amount 1100 withdrawn. New balance is 100
```

3.Code:

```
import java.io.*;
import java.util.*;
class FizzBuzz
{
    public static void main(String arg[])
    {
        int i;
        String a[]=new String[1000];
        Scanner s=new Scanner(System.in);
```

```
        System.out.print("Enter N value :");
        i=s.nextInt();
        for(int j=1;j<=i;j++)
        {
                if(j%3==0 && j%5==0)
                {
                        a[j-1]="FizzBuzz";
                }
                else if(j%3==0)
                {
                        a[j]="Fizz";
                }
                else if(j%5==0)
                {
                        a[j]="Buzz";
                }
                else
                {
                        a[j]=Integer.toString(j);
                }
        }
        System.out.println("List :");
        for(int j=1;j<=i;j++)
        {
                System.out.println(a[j]);
        }
}
```

}

Output:

```
C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-4 Assignment>javac FizzBuzz.java

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-4 Assignment>java FizzBuzz
Enter N value :10
List :
1
2
Fizz
4
Buzz
Fizz
7
8
Fizz
Buzz

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-4 Assignment>
```

4.Code:

```
import java.io.*;
import java.util.*;
class StringShifts
{
	public static boolean canBecomeGoal(String s, String goal)
	{
	if (s.length() != goal.length())
		{
		return false;
	}
	for (int i = 0; i < s.length(); i++)
		{
		if (s.equals(goal))
			{
			return true;
		}
		s = s.substring(1) + s.charAt(0);
```

```
        }
        return false;
        }
        public static void main(String[] args)
        {
        String s1;
        String goal;
                Scanner s=new Scanner(System.in);
                System.out.print("S :");
                s1=s.nextLine();
                System.out.print("goal :");
                goal=s.nextLine();
        System.out.println(canBecomeGoal(s1, goal)); // false
        }
}
```

Output:

```
C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-4 Assignment>javac StringShifts.java

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-4 Assignment>java StringShifts
S :abcde
goal :cdeab
true

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-4 Assignment>java StringShifts
S :abcde
goal :abced
false

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-4 Assignment>
```

5.Code:

```
class PrimeExample implements Runnable
{
        @Override
```

```
public void run()
{
        int i, m = 20, flag = 1;
        for (i = 1; i <= m; i++)
        {
        if (i <= 3)
                {
                System.out.println(i + " is prime number");
                continue;
        }
                else
                {
                flag = 1;
                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());
        }
    }
}
```

Output:

```
C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-4 Assignment>javac prime.java

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-4 Assignment>java prime
1 is prime number
2 is prime number
3 is prime number
4 is not prime number
5 is prime number
6 is not prime number
7 is prime number
8 is not prime number
9 is not prime number
10 is not prime number
11 is prime number
12 is not prime number
13 is prime number
14 is not prime number
15 is not prime number
16 is not prime number
17 is prime number
18 is not prime number
19 is prime number
20 is not prime number

C:\Users\saran\OneDrive\Desktop\Java\Assignment\Day-4 Assignment>
```