Assignment-03

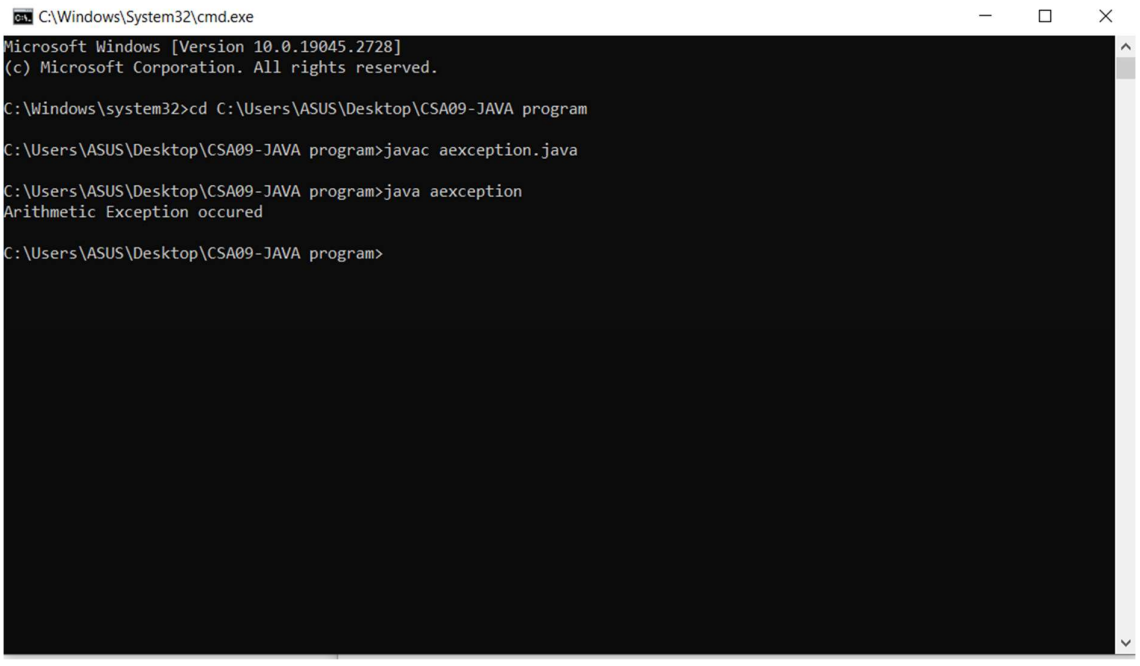
Name: T Sumanth **Reg.NO:192011452**

1.Arithmetic Exception

Program

```
import java.io.*;
import java.util.*;
class aexception
{
   public static void main(String[] args) {
   try{
   int a[]=new int[5];
   a[5]=30/0;
   }
   catch(ArithmeticException e)
   {
      System.out.println("Arithmetic Exception occured");
   }
}
}
```

Output:



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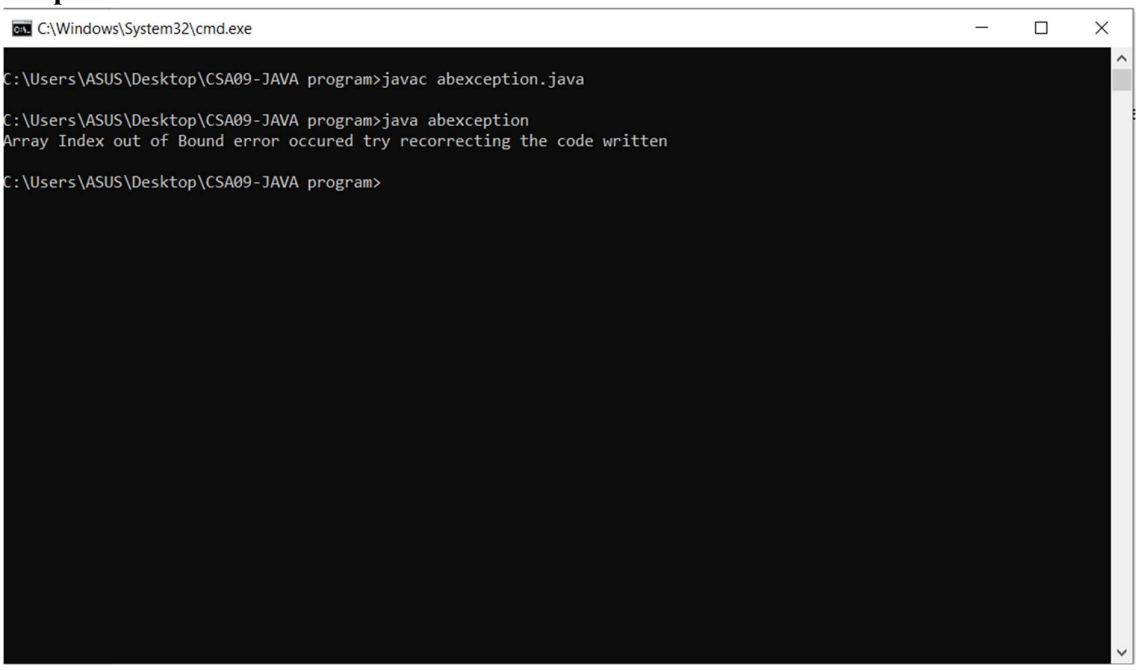
Array Out of Bound Exception

Program

```
import java.io.*;
import java.util.*;
class abexception {
   public static void main(String[] args)
    {
    try
    {
    int a[]=new int[5];
    System.out.println(a[10]);
    }
    catch(ArrayIndexOutOfBoundsException e)
    {
      System.out.println("Array Index out of Bound error occured try recorrecting the code written");

    }
   }
}
```

Output:



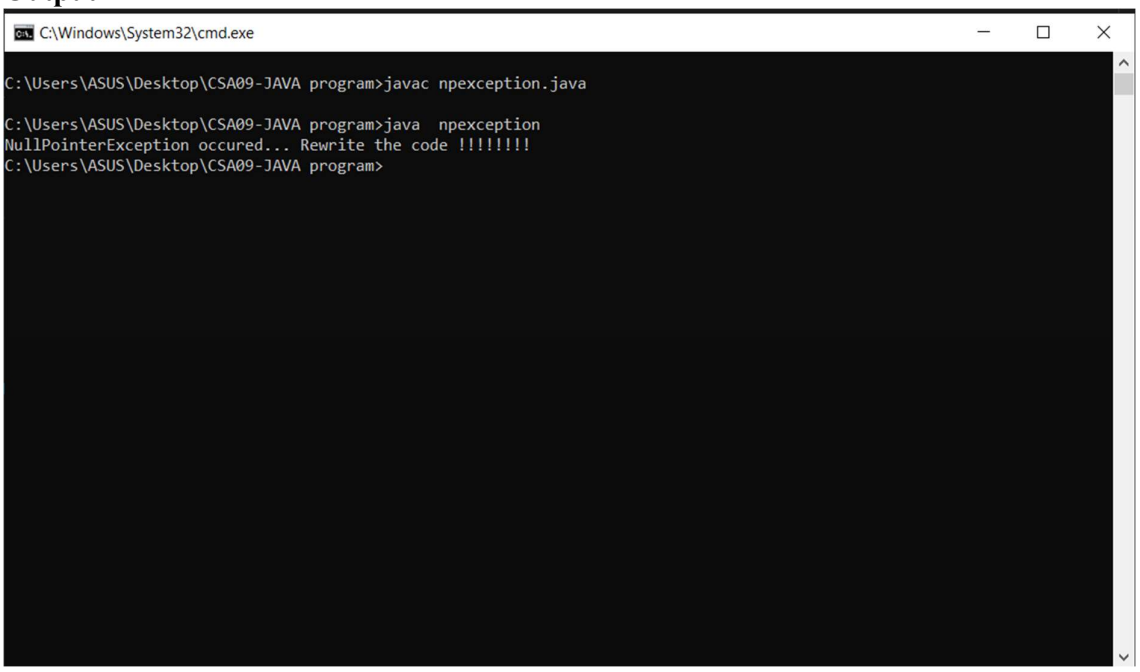
Null Pointer exception

Program:

```
import java.io.*;
class npexception {
   public static void main(String[] args) {
      String ptr = null;
      try {
         if (ptr.equals("gfg"))
            System.out.print("Same");
```

```
            else
                System.out.print("Not Same");
        } catch (NullPointerException e) {
            System.out.print("NullPointerException occured... Rewrite the code !!!!!!!!");
        }
    }
}
```

Output

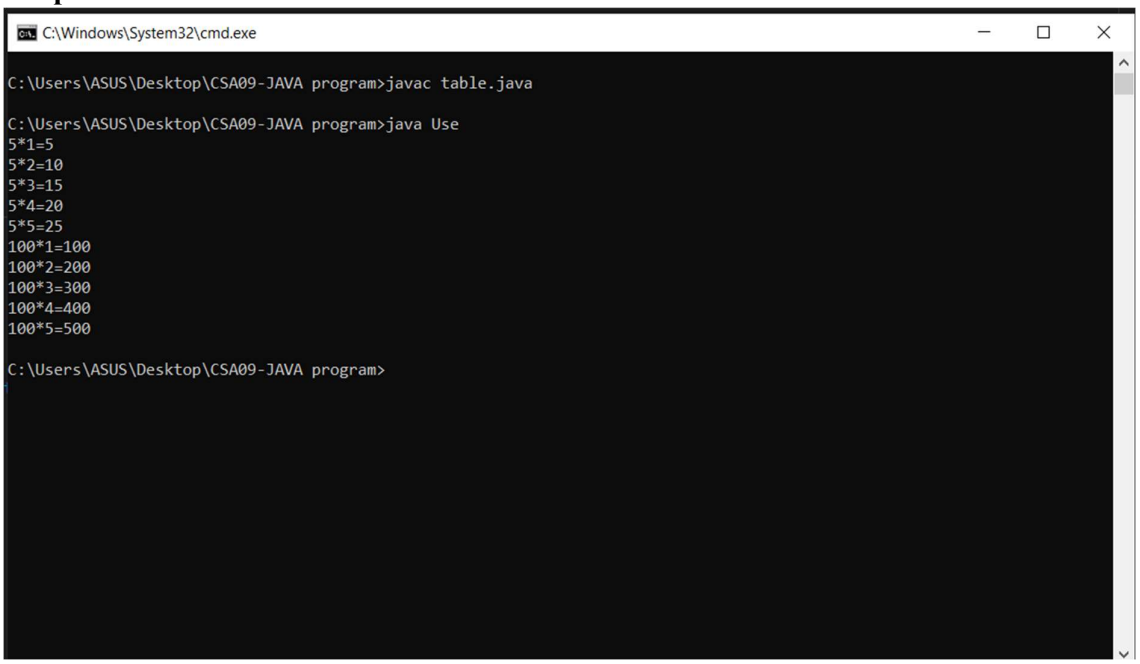


2 Program

```
import java.io.*;
import java.util.*;
class Table {
    void printTable(int n) {
        synchronized (this) {
            for (int i = 1; i <= 5; i++) {
                System.out.println(+n + "*" + i + "=" + (n * i));
                try {
                    Thread.sleep(400);
                } catch (Exception e) {
                    System.out.println(e);
                }
            }
        }
    }
}

class Mythread1 extends Thread {
    Table t;

    Mythread1(Table t) {
```

```
        this.t = t;
    }

    public void run() {
        t.printTable(5);
    }
}

class Mythread2 extends Thread {
    Table t;

    Mythread2(Table t) {
        this.t = t;
    }

    public void run() {
        t.printTable(100);
    }
}

class Use {
    public static void main(String args[]) {
        Table obj = new Table();
        Mythread1 th1 = new Mythread1(obj);
        Mythread2 th2 = new Mythread2(obj);
        th1.start();
        th2.start();
    }
}
```

Output



3. Program

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```
import java.util.*;
import java.io.*;

public class ugly {
   public static void main(String args[]) {
      int inputNumber;
      Scanner sc = new Scanner(System.in);
      System.out.println("Enter the number :");
      inputNumber = sc.nextInt();
      boolean check = true;
      for (int i = 2; i <= inputNumber; i++) {
         if (i != 2 && i != 3 && i != 5) {
            if (inputNumber % i == 0 && checkPrime(i)) {
               check = false;
               break;
            }
         }
      }
      if (check) {
         System.out.println(inputNumber + " is an ugly number");
      } else {
         System.out.println(inputNumber + " is Not an ugly number");
      }
   }

   static boolean checkPrime(int number) {
      boolean flag = true;
      for (int i = 2; i <= number / 2; i++) {
         if (number % i == 0) {
            flag = false;
            break;
         }
      }
      return flag;
   }
}
```

Output

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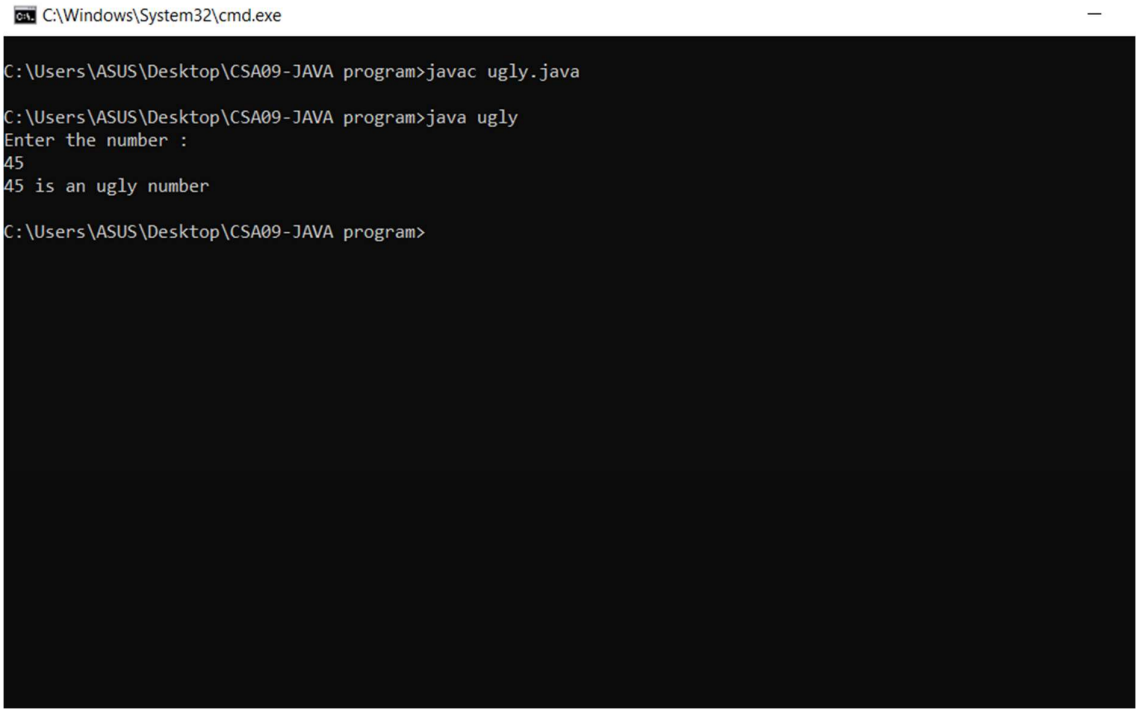

4.Program

```
import java.io.*;
import java.util.*;

class fibo {
   static int fib(int n) {
      if (n == 0 || n == 1)
         return 0;
      else if (n == 2)
         return 1;
      return fib(n - 1) + fib(n - 2);
   }

   public static void main(String args[]) {
      int n;
      Scanner sc = new Scanner(System.in);
      System.out.println("Enter the value of n : ");
      n = sc.nextInt();
      System.out.println(fib(n));
   }
}
```

Output

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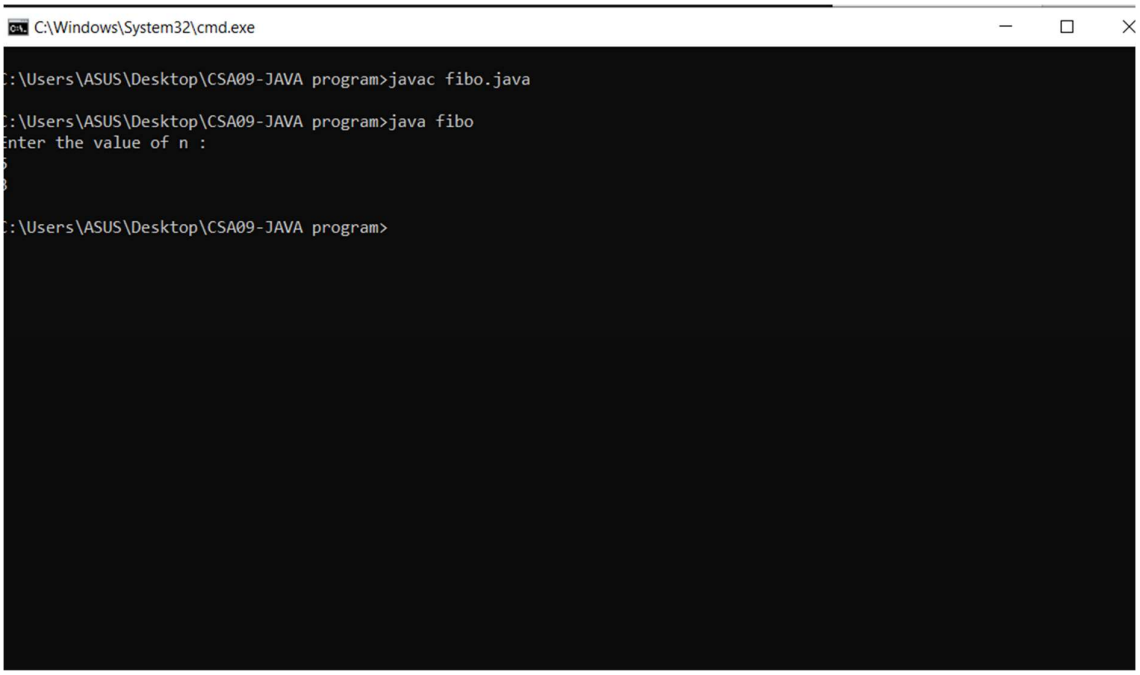

5.**Program**

```
import java.io.*;
import java.util.*;

class duplicate {
    static int removeDuplicates(int arr[], int n) {
        if (n == 0 || n == 1)
            return n;
        int[] temp = new int[n];
        int j = 0;
        for (int i = 0; i < n - 1; i++) {
            if (arr[i] != arr[i + 1])
                temp[j++] = arr[i];
        }
        temp[j++] = arr[n - 1];
        for (int i = 0; i < j; i++) {
            arr[i] = temp[i];
        }
        return j;
    }

    public static void main(String[] args) {
        int arr[] = { 10, 20, 20, 30, 40, 40, 40, 50, 50 };
        int n = arr.length;
        n = removeDuplicates(arr, n);
        for (int i = 0; i < n; i++) {
            System.out.print(arr[i] + " ");
        }
    }
}
```

Output

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