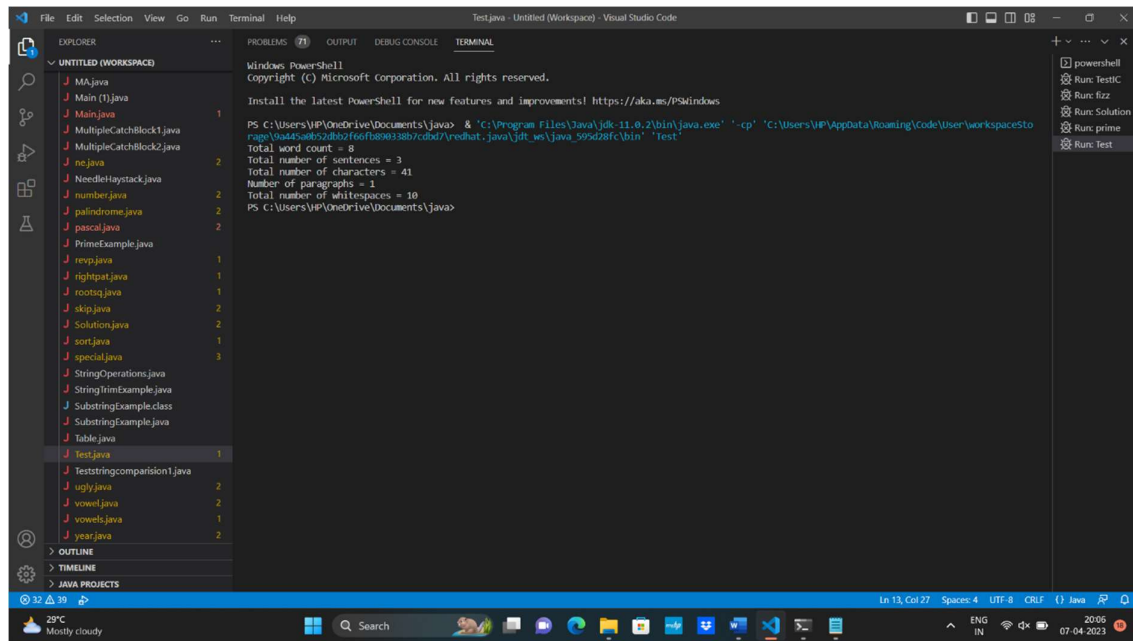


PROGRAM:1

```
import java.io.*;
public class Test {
    public static void main(String[] args)
        throws IOException
    {
        File file = new File("C:\\Users\\HP\\Desktop\\text.txt");
        FileInputStream fileInputStream = new FileInputStream(file);
        InputStreamReader inputStreamReader = new
InputStreamReader(fileInputStream);
        BufferedReader bufferedReader = new BufferedReader(inputStreamReader);
        String line;
        int wordCount = 0;
        int characterCount = 0;
        int paraCount = 0;
        int whiteSpaceCount = 0;
        int sentenceCount = 0;
        while ((line = bufferedReader.readLine()) != null) {
            if (line.equals("")) {
                paraCount += 1;
            }
            else {
                characterCount += line.length();
                String words[] = line.split("\\s+");
                wordCount += words.length;
                whiteSpaceCount += wordCount - 1;
                String sentence[] = line.split("[!?.:]+");
                sentenceCount += sentence.length;
            }
        }
        if (sentenceCount >= 1) {
            paraCount++;
        }
        System.out.println("Total word count = " + wordCount);
        System.out.println("Total number of sentences = " + sentenceCount);
        System.out.println("Total number of characters = " + characterCount);
        System.out.println("Number of paragraphs = " + paraCount);
        System.out.println("Total number of whitespaces = " + whiteSpaceCount);
    }
}
```

OUTPUT:



PROGRAM:2

```
class Customer{
    int amount=10000;

    synchronized void withdraw(int amount)
    {
        System.out.println("going to withdraw...");

        if(this.amount<amount)
        {
            System.out.println("Less balance; waiting for deposit...");
            try
            {
                wait();
            }
            catch(Exception e)
            {}
        }
        this.amount-=amount;
        System.out.println("withdraw completed...");
        System.out.println(amount);
    }

    synchronized void deposit(int amount)
    {
        System.out.println("going to deposit...");
```

```

        this.amount+=amount;
        System.out.println("deposit completed... ");
        notify();
    }
}

class TestIC{
    public static void main(String args[]){
        final Customer c=new Customer();
        new Thread()
        {
            public void run()
            {
                c.withdraw(15000);
            }
        }.start();
        new Thread()
        {
            public void run()
            {
                c.deposit(10000);
            }
        }.start();
    }
}

```

OUTPUT:

The screenshot shows the Visual Studio Code interface with the following details:

- Explorer Pane (Left):** Lists files in the 'UNTITLED (WORKSPACE)' including `account.java`, `age.java`, `chanceSearch.java`, `composite.java`, `Customer.java`, `days.java`, `duplicate.java`, `factor.java`, `fibonacci.java`, `GDemo.java`, `Hello.java`, `Implement.java`, `ImplementStrStr.java`, `last.java`, `LengthExample.java`, `letter.java`, `MA.java`, `Main (1).java`, `Main.java`, `MultipleCatchBlock1.java`, `MultipleCatchBlock2.java`, `ne.java`, `NeedleHaystack.java`, `number.java`, `palindrome.java`, `pascal.java`, and `rev.java`.
- Terminal Pane (Bottom):** Shows the output of the Java program:


```

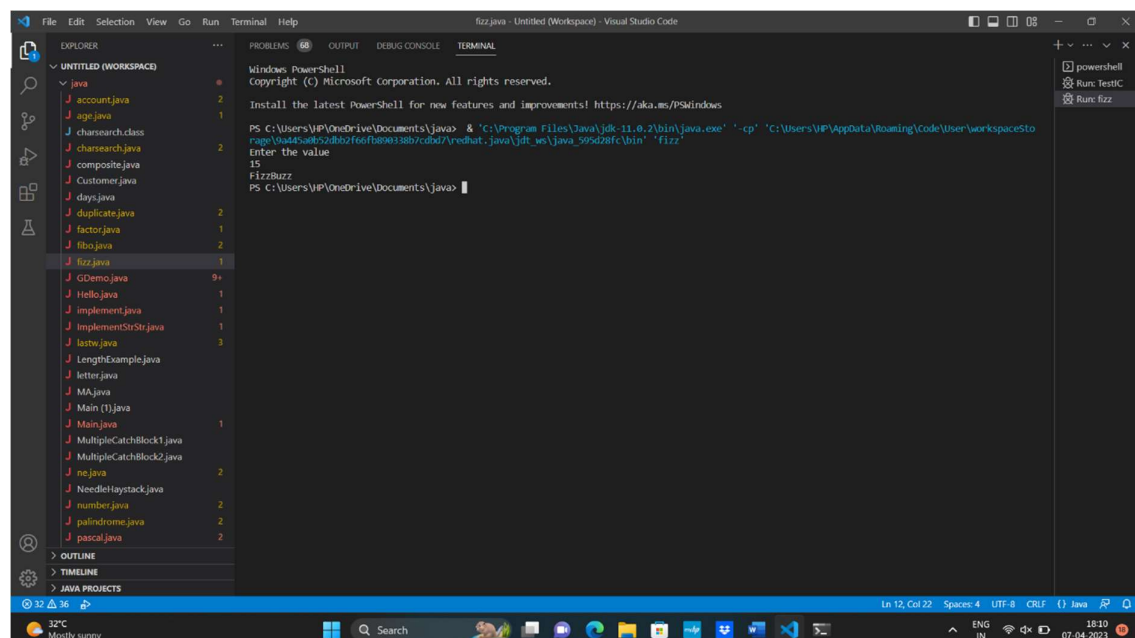
      Copyright (C) Microsoft Corporation. All rights reserved.
      Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

      PS C:\Users\VP\OneDrive\Documents\Java> & "c:\program files\java\jdk-11.0.2\bin\java.exe" "-cp" "c:\Users\VP\AppData\Local\Code\User\workspace\to
      rage\9a645a6f62d802f66f80933807c0d27\src\test\java\src\main\java_595028f\bin" "TestIC"
      going to withdraw...
      Less balance; waiting for deposit...
      going to deposit...
      deposit completed...
      withdraw completed...
      15000
      PS C:\Users\VP\OneDrive\Documents\Java>
      
```
- Bottom Status Bar:** Displays 'Ln 44, Col 26', 'Spaces: 4', 'UTF-8', 'CRLF', and the file name 'Customer.java'.

PROGRAM:3

```
import java.util.*;
class fizz
{
public static void main(String[] args)
{
    try
    {
int n;
    Scanner sc=new Scanner(System.in);
    System.out.println("Enter the value");
    n=sc.nextInt();
if (n%5==0 && n%3==0)
System.out.println("FizzBuzz");
else if (n%5==0)
System.out.println("Buzz");
else if (n%3==0)
System.out.println("Fizz");
else
    System.out.println("Enter a number divisible by 3 or 5");
}
catch(Exception e)
{
    System.out.println("Due to character exception");
}
}
}
```

OUTPUT:

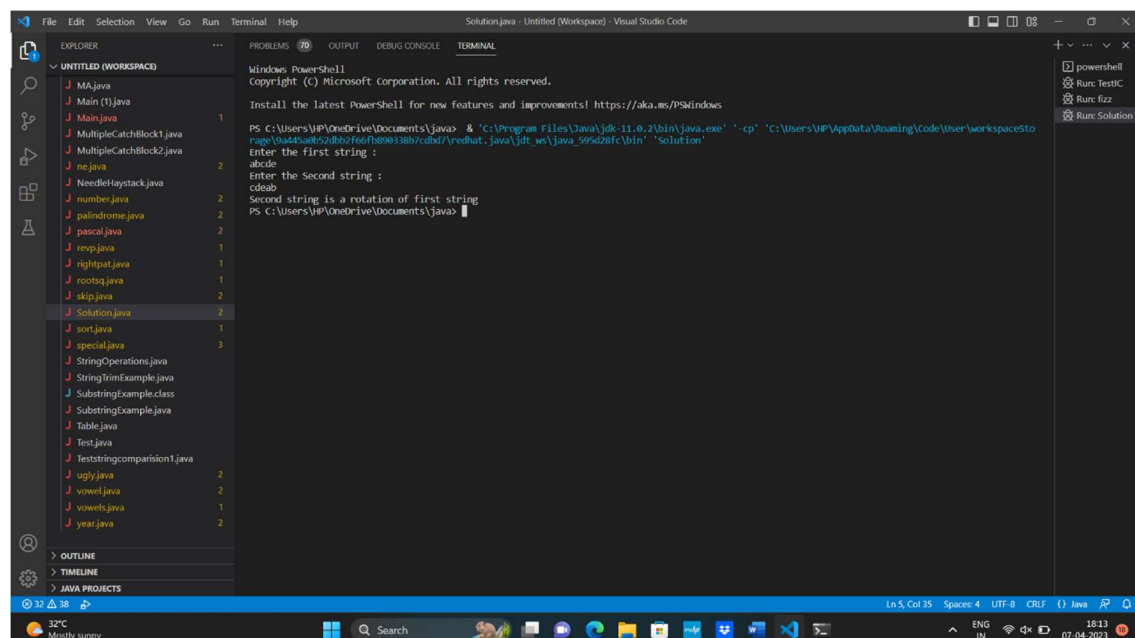


The screenshot displays the Visual Studio Code interface. The Explorer pane on the left shows a file named 'fizz.java' selected. The Terminal pane on the right shows the command prompt output: 'Enter the value', '15', 'FizzBuzz', and 'PS C:\Users\VIP\OneDrive\Documents\java>'. The status bar at the bottom indicates 'Ln 12, Col 22'.

PROGRAM:4

```
import java.io.*;
import java.util.*;
public class Solution
{
    public static void main(String[] args) {
        String str1, str2;
        Scanner sc =new Scanner(System.in);
        System.out.println("Enter the first string : ");
        str1=sc.nextLine();
        System.out.println("Enter the Second string : ");
        str2=sc.nextLine();
        if(str1.length() != str2.length()){
            System.out.println("Second string is not a rotation of first
string");
        }
        else {
            str1 = str1.concat(str1);
            if(str1.indexOf(str2) != -1)
                System.out.println("Second string is a rotation of first
string");
            else
                System.out.println("Second string is not a rotation of first
string");
        }
    }
}
```

OUTPUT:



PROGRAM:5

```
class PrimeExample implements Runnable
//extends Thread
{

    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 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");
                flag=1;
            }
            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:

