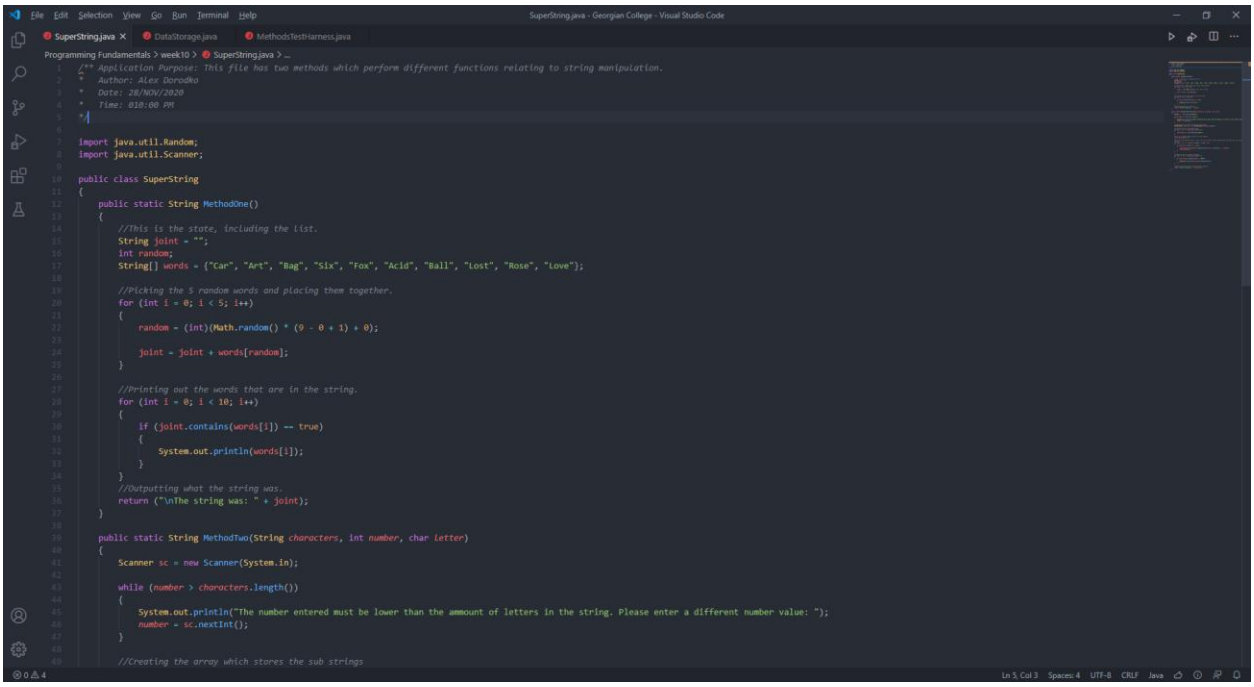
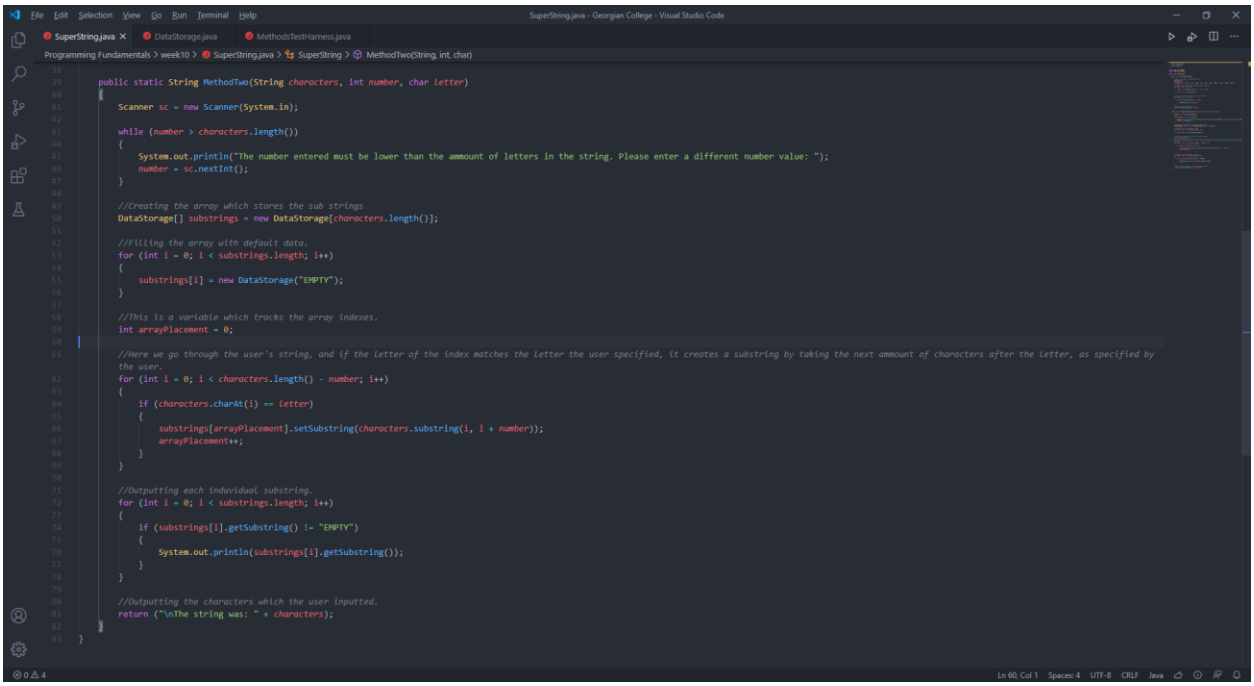
SuperString.java (Main File)

Part 1



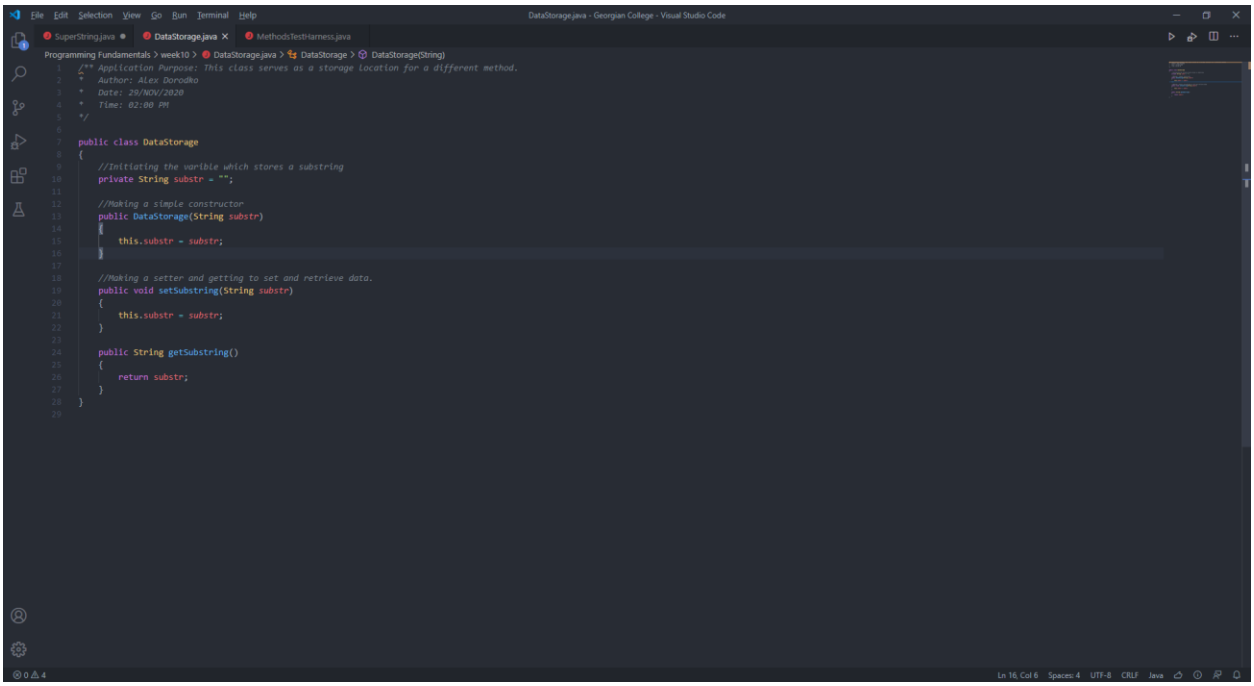
```java
/** Application Purpose: This file has two methods which perform different functions relating to string manipulation.
 *  Author: Alex Dorodko
 *  Date: 28/NOV/2020
 *  Time: 010:00 PM
 */

import java.util.Random;
import java.util.Scanner;

public class SuperString
{
    public static String MethodOne()
    {
        //This is the state, including the list.
        String joint = "";
        int random;
        String[] words = {"Car", "Art", "Bag", "Six", "Fox", "Acid", "Ball", "Lost", "Rose", "Love"};

        //Picking the 5 random words and placing them together.
        for (int i = 0; i < 5; i++)
        {
            random = (int)(Math.random() * (9 - 0 + 1) + 0);

            joint = joint + words[random];
        }

        //Printing out the words that are in the string.
        for (int i = 0; i < 10; i++)
        {
            if (joint.contains(words[i]) == true)
            {
                System.out.println(words[i]);
            }
        }
        //Outputting what the string was.
        return ("\nThe string was: " + joint);
    }

    public static String MethodTwo(String characters, int number, char letter)
    {
        Scanner sc = new Scanner(System.in);

        while (number > characters.length())
        {
            System.out.println("The number entered must be lower than the ammount of letters in the string. Please enter a different number value: ");
            number = sc.nextInt();
        }

        //Creating the array which stores the sub strings
```

Part 2



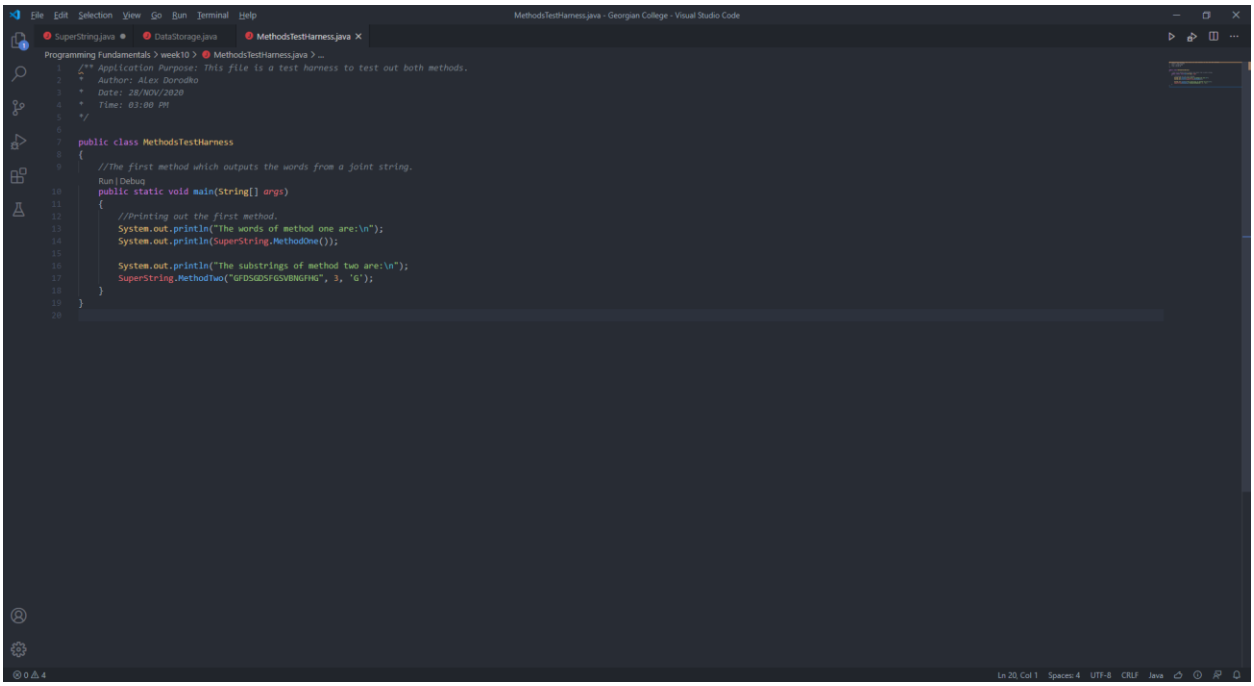
```java
    public static String MethodTwo(String characters, int number, char letter)
    {
        Scanner sc = new Scanner(System.in);

        while (number > characters.length())
        {
            System.out.println("The number entered must be lower than the ammount of letters in the string. Please enter a different number value: ");
            number = sc.nextInt();
        }

        //Creating the array which stores the sub strings
        DataStorage[] substrings = new DataStorage[characters.length()];

        //Filling the array with default data.
        for (int i = 0; i < substrings.length; i++)
        {
            substrings[i] = new DataStorage("EMPTY");
        }

        //This is a variable which tracks the array indexes.
        int arrayPlacement = 0;

        //Here we go through the user's string, and if the letter of the index matches the letter the user specified, it creates a substring by taking the next ammount of characters after the letter, as specified by
        the user.
        for (int i = 0; i < characters.length() - number; i++)
        {
            if (characters.charAt(i) == letter)
            {
                substrings[arrayPlacement].setSubstring(characters.substring(i, i + number));
                arrayPlacement++;
            }
        }

        //Outputting each individual substring.
        for (int i = 0; i < substrings.length; i++)
        {
            if (substrings[i].getSubstring() != "EMPTY")
            {
                System.out.println(substrings[i].getSubstring());
            }
        }

        //Outputting the characters which the user inputted.
        return ("\nThe string was: " + characters);
    }
}
```

DataStorage.java (Storage File)



```java
/** Application Purpose: This class serves as a storage location for a different method.
 *  Author: Alex Dorodko
 *  Date: 29/NOV/2020
 *  Time: 02:00 PM
 */

public class DataStorage
{
    //Initiating the varible which stores a substring
    private String substr = "";

    //Making a simple constructor
    public DataStorage(String substr)
    {
        this.substr = substr;
    }

    //Making a setter and getting to set and retrieve data.
    public void setSubstring(String substr)
    {
        this.substr = substr;
    }

    public String getSubstring()
    {
        return substr;
    }
}
```

MethodsTestHarness.java



```java
/** Application Purpose: This file is a test harness to test out both methods.
 *  Author: Alex Dorodko
 *  Date: 28/NOV/2020
 *  Time: 03:00 PM
 */

public class MethodsTestHarness
{
    //The first method which outputs the words from a joint string.
    Run | Debug
    public static void main(String[] args)
    {
        //Printing out the first method.
        System.out.println("The words of method one are:\n");
        System.out.println(SuperString.MethodOne());

        System.out.println("The substrings of method two are:\n");
        SuperString.MethodTwo("GFDSGDSFGSVBNGFHG", 3, 'G');
    }
}
```