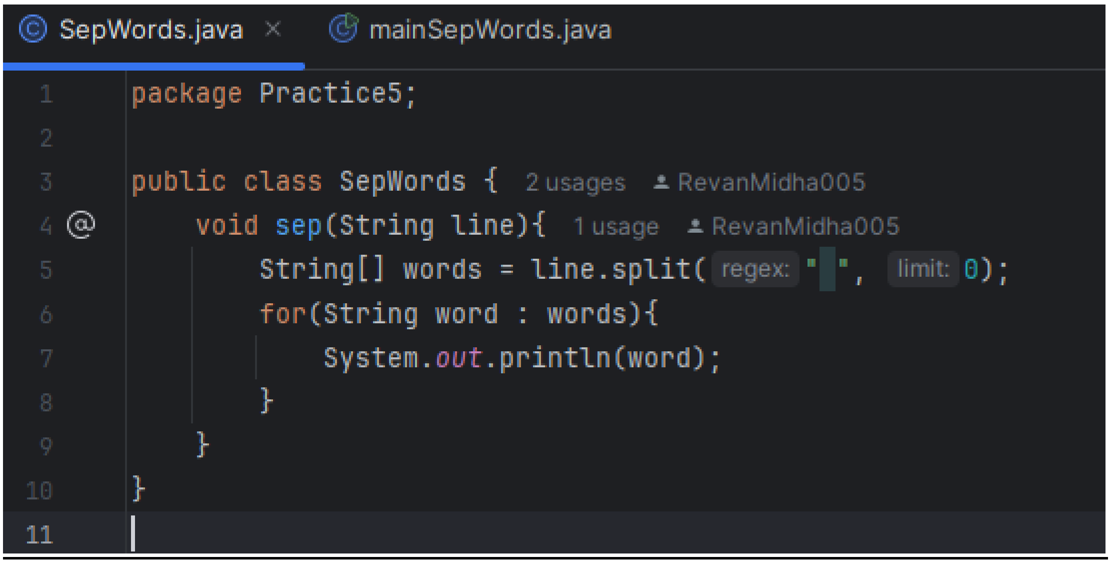
Assignment – 7

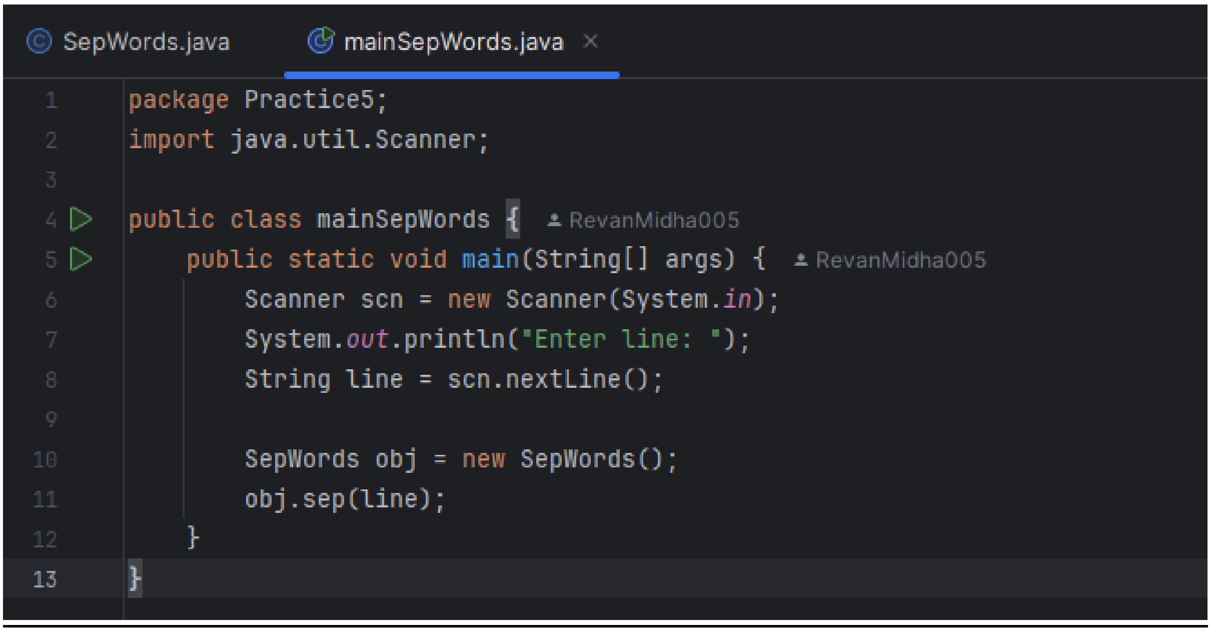
Practice Questions : 1

Q1) Accept a sentence from user and print its every word on separate line.

CODE :

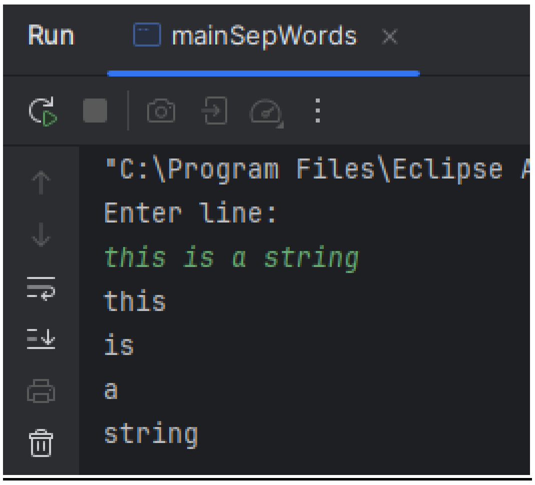


```
package Practice5;

public class SepWords {
    void sep(String line){
        String[] words = line.split(" ", 0);
        for(String word : words){
            System.out.println(word);
        }
    }
}
```



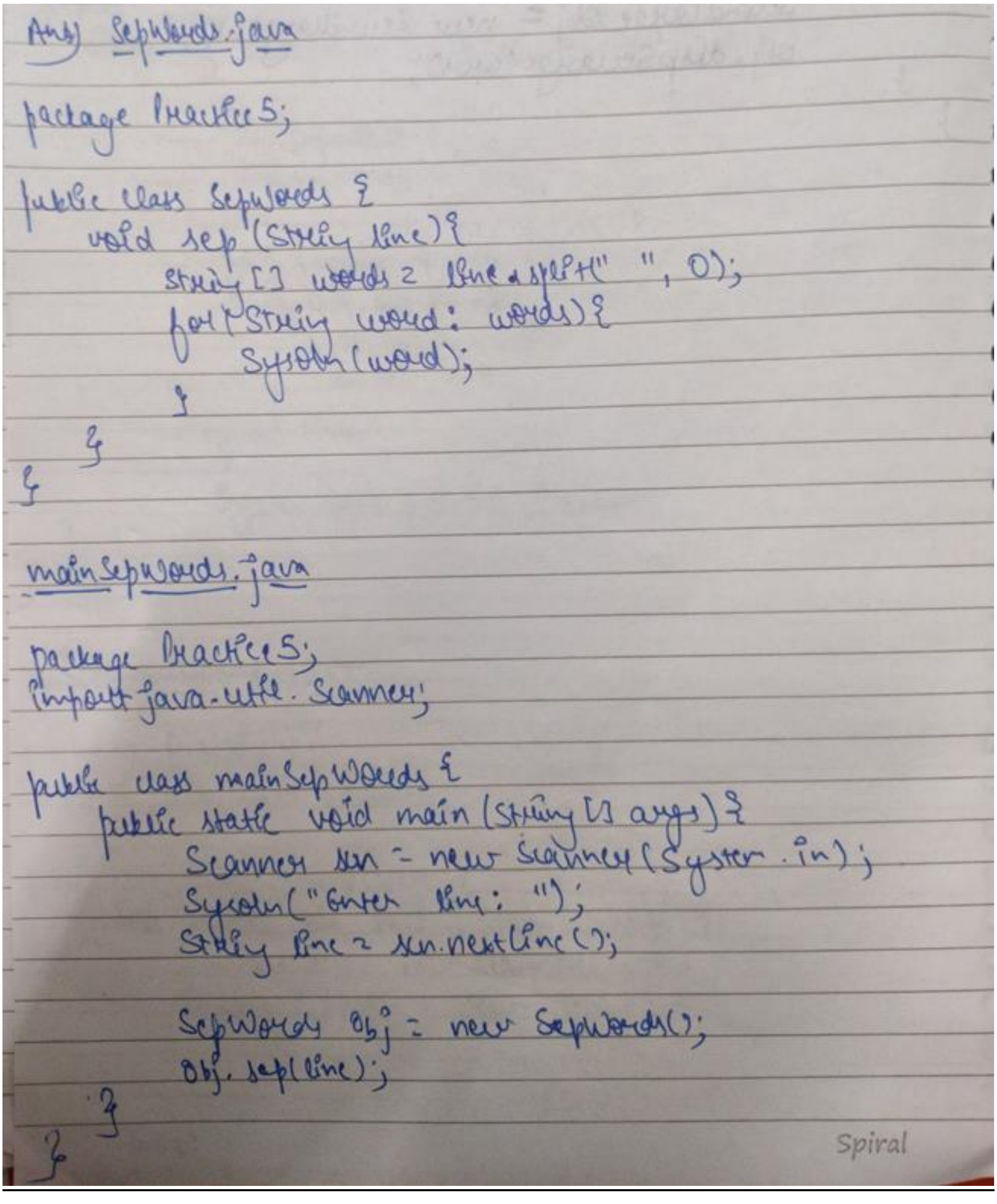
```
package Practice5;
import java.util.Scanner;

public class mainSepWords {
    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        System.out.println("Enter line: ");
        String line = scn.nextLine();

        SepWords obj = new SepWords();
        obj.sep(line);
    }
}
```

OUTPUT :



```
"C:\Program Files\Eclipse A
Enter line:
this is a string
this
is
a
string
```

HANDWRITTEN :



Ans) SepWords.java

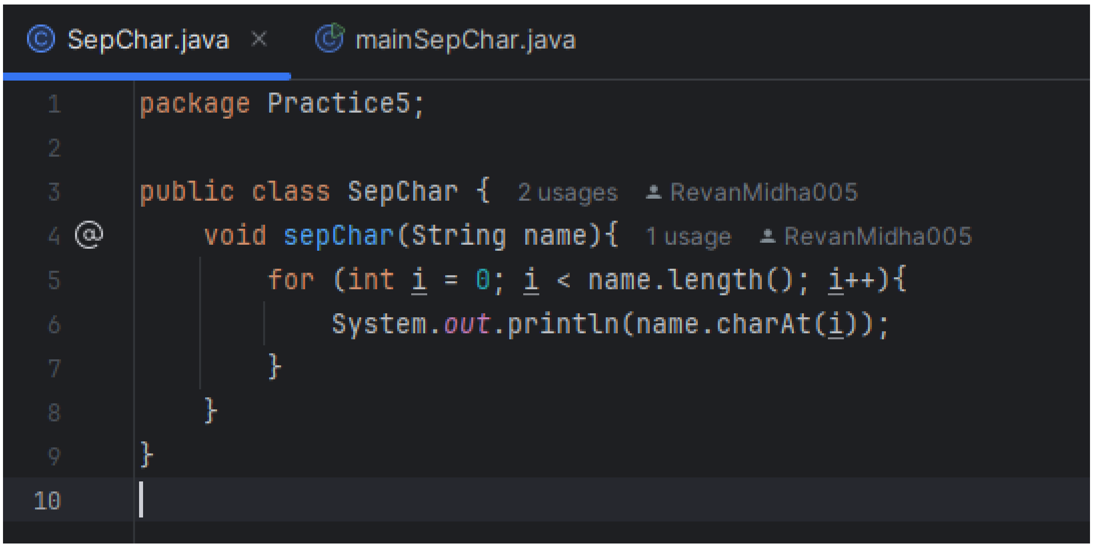
```
package Practice5;

public class SepWords {
    void sep(String line){
        String[] words = line.split(" ", 0);
        for(String word: words){
            Sysoln(word);
        }
    }
}
```

mainSepWords.java

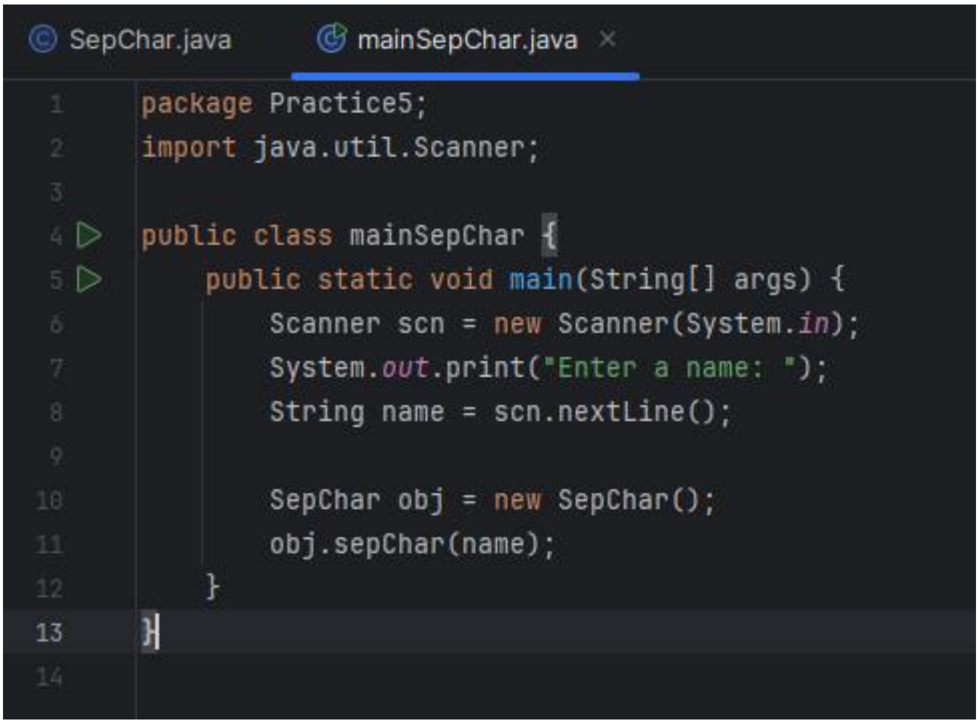
```
package Practice5;
import java.util.Scanner;

public class mainSepWords {
    public static void main(String[] args){
        Scanner scn = new Scanner(System.in);
        Sysoln("Enter line: ");
        String line = scn.nextLine();

        SepWords obj = new SepWords();
        obj.sep(line);
    }
}
```

Q2) Accept the name of the user and print all its character on different line.

CODE :

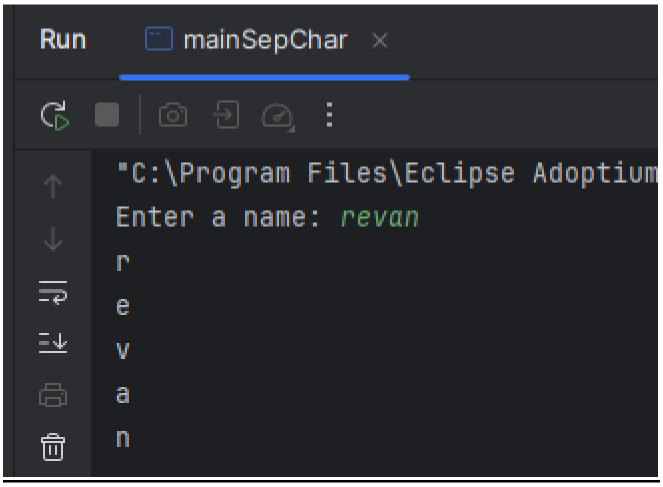


```java
package Practice5;

public class SepChar {
    void sepChar(String name){
        for (int i = 0; i < name.length(); i++){
            System.out.println(name.charAt(i));
        }
    }
}

```



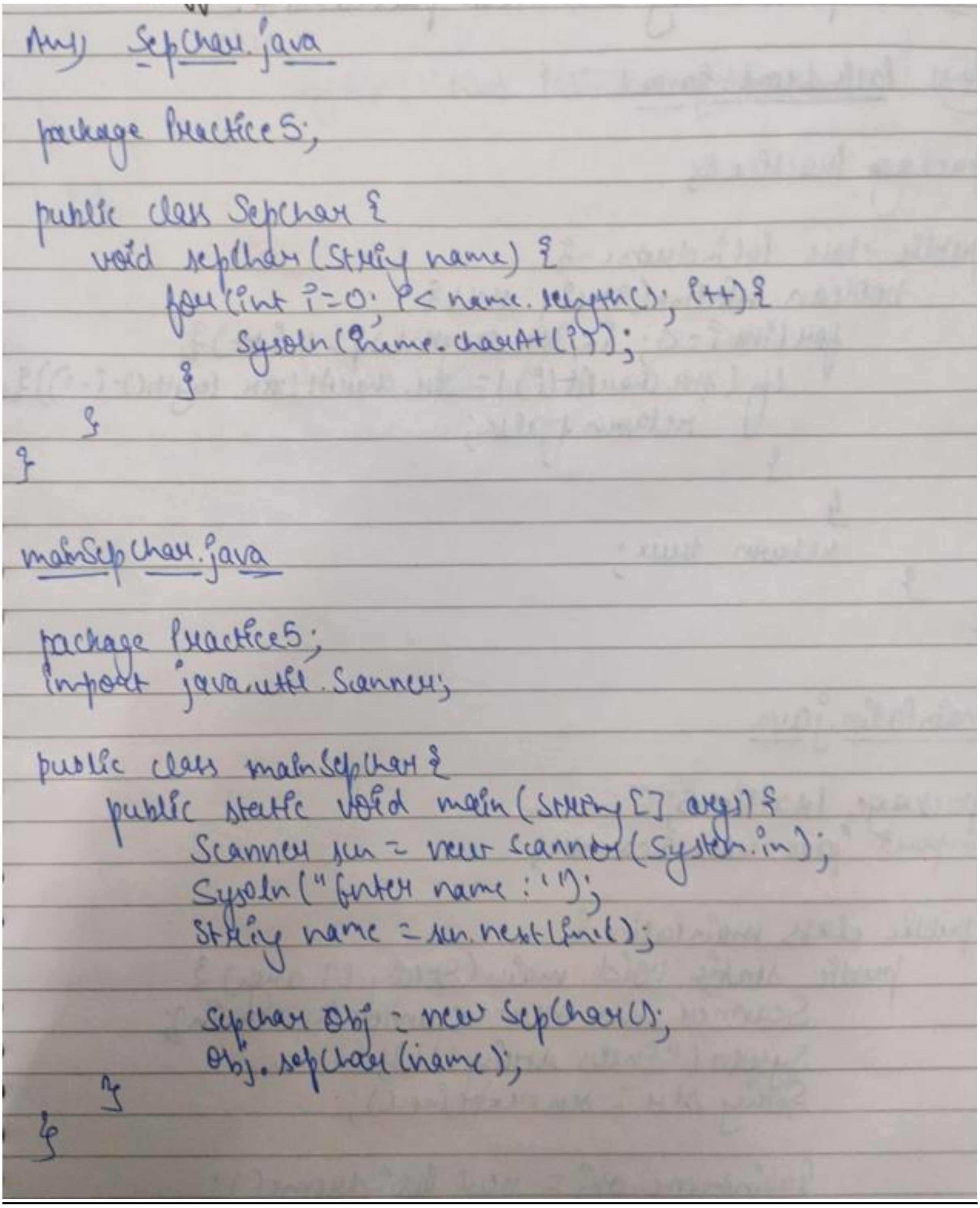
```java
package Practice5;
import java.util.Scanner;

public class mainSepChar {
    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        System.out.print("Enter a name: ");
        String name = scn.nextLine();

        SepChar obj = new SepChar();
        obj.sepChar(name);
    }
}

```

OUTPUT :



```
"C:\Program Files\Eclipse Adoptium
Enter a name: revan
r
e
v
a
n
```

HANDWRITTEN :



Ans) SepChar.java

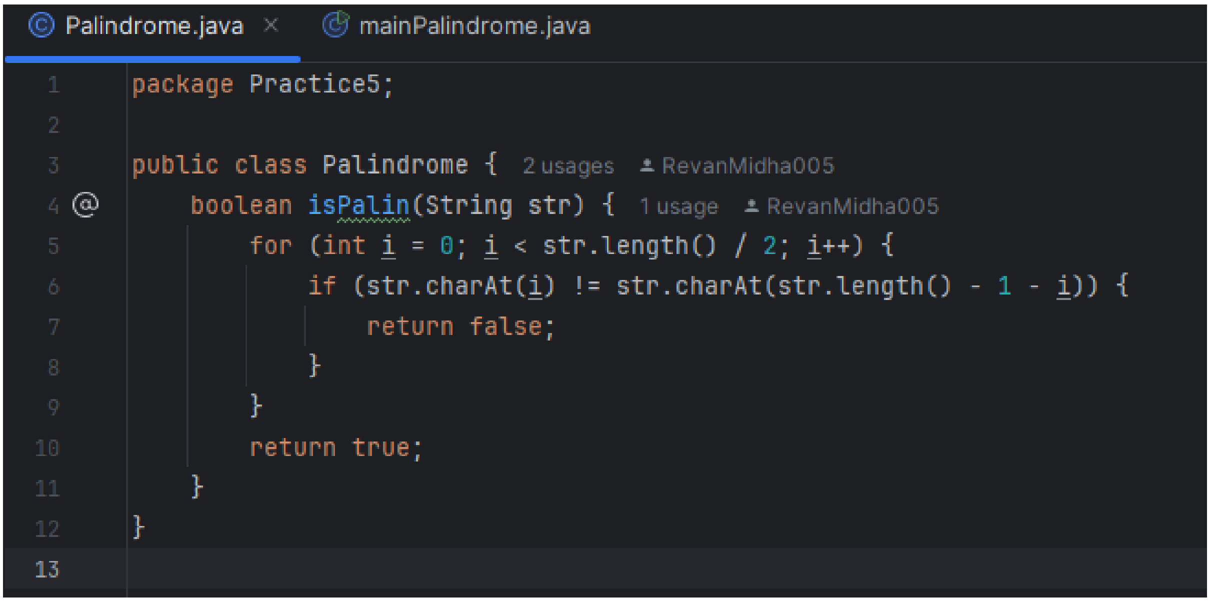
```
package Practice5;

public class SepChar {
    void sepChar(String name) {
        for(int i=0; i< name.length(); i++){
            Sysoln(name.charAt(i));
        }
    }
}
```

mainSepChar.java

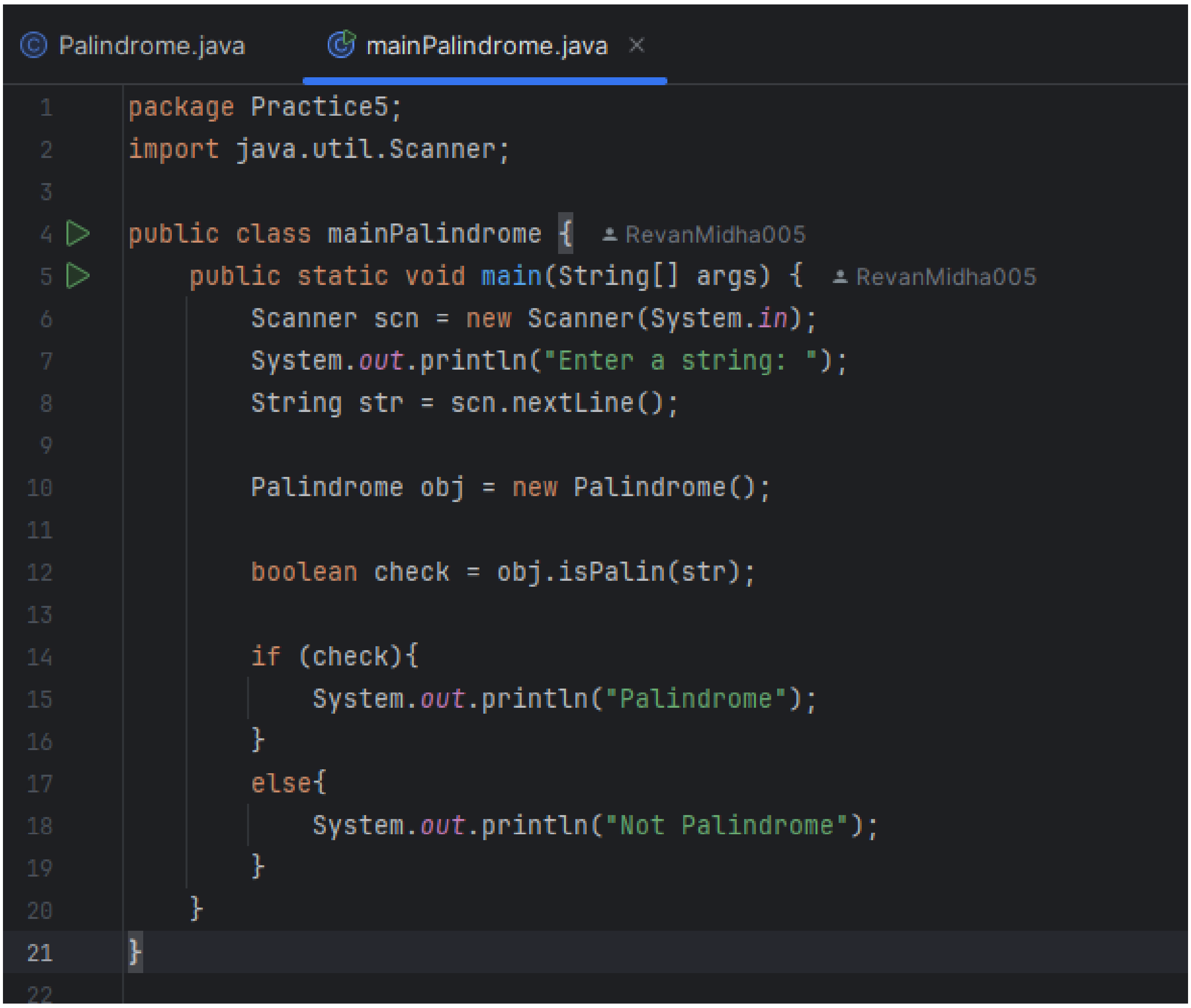
```
package Practice5;
import java.util.Scanner;

public class mainSepChar {
    public static void main(String[] args){
        Scanner scn = new Scanner(System.in);
        Sysoln("Enter name :");
        String name = scn.nextLine();

        SepChar Obj = new SepChar();
        Obj.sepChar(name);
    }
}
```

Q3) Accept a string from user and check whether it is palindrome or not.

CODE :

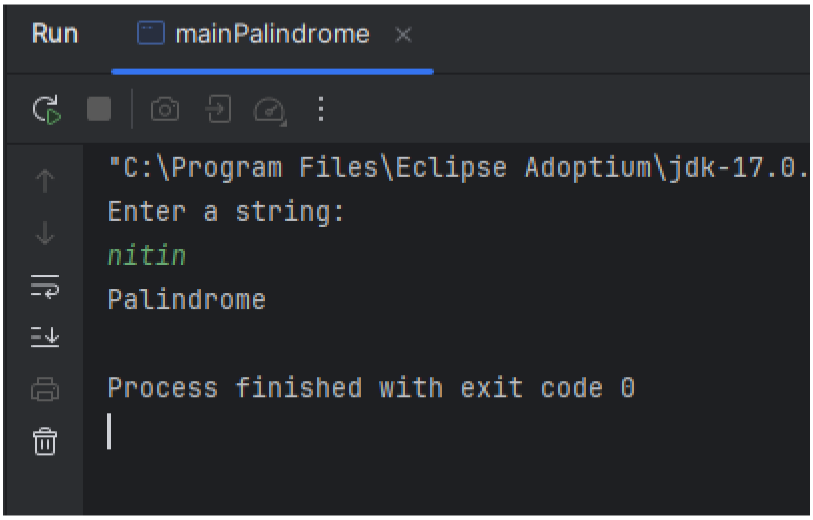


```java
package Practice5;

public class Palindrome {
    boolean isPalin(String str) {
        for (int i = 0; i < str.length() / 2; i++) {
            if (str.charAt(i) != str.charAt(str.length() - 1 - i)) {
                return false;
            }
        }
        return true;
    }
}
```



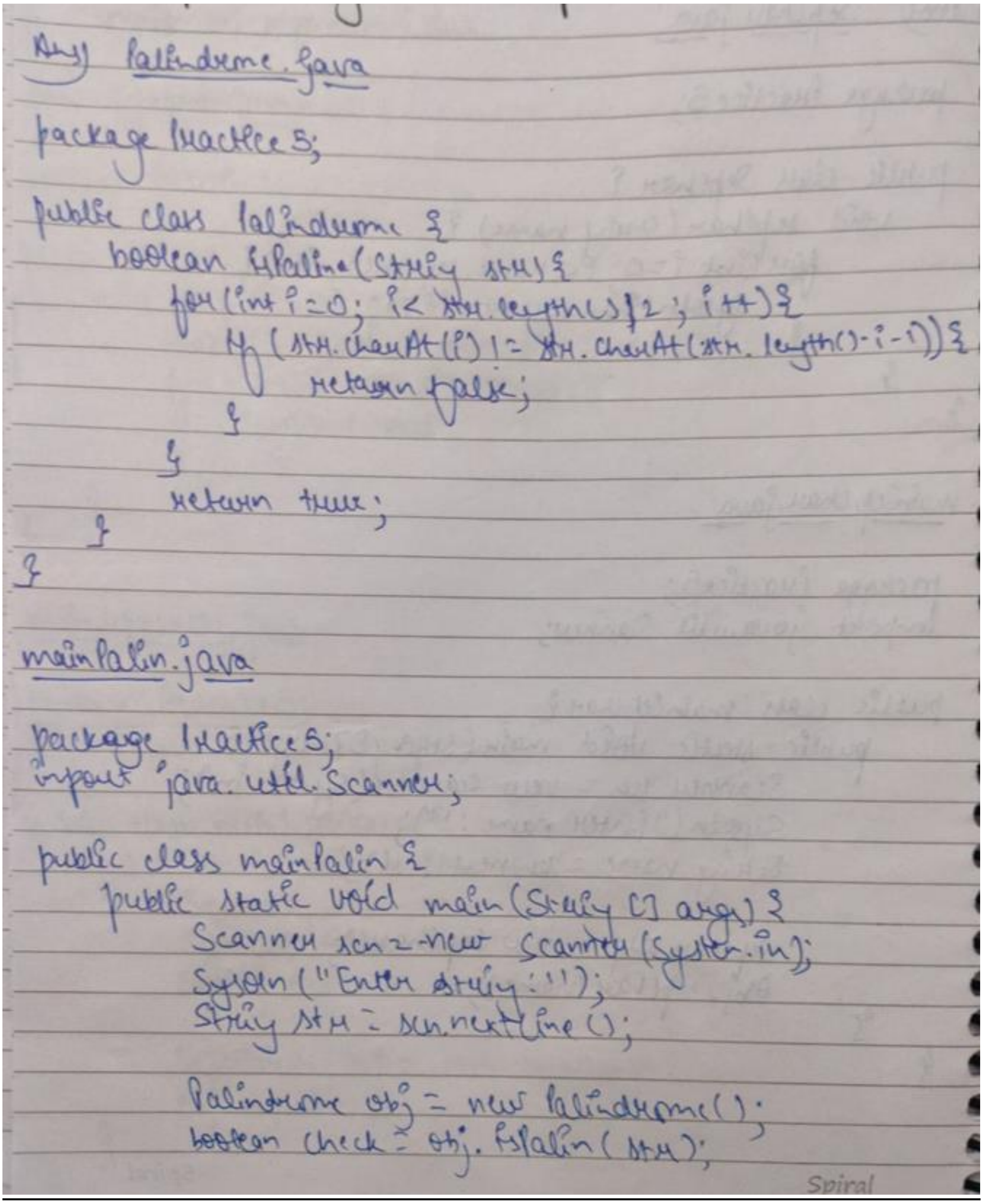
```java
package Practice5;
import java.util.Scanner;

public class mainPalindrome {
    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        System.out.println("Enter a string: ");
        String str = scn.nextLine();

        Palindrome obj = new Palindrome();

        boolean check = obj.isPalin(str);

        if (check){
            System.out.println("Palindrome");
        }
        else{
            System.out.println("Not Palindrome");
        }
    }
}
```

OUTPUT :



```
"C:\Program Files\Eclipse Adoptium\jdk-17.0.
Enter a string:
nitin
Palindrome

Process finished with exit code 0
```

HANDWRITTEN :

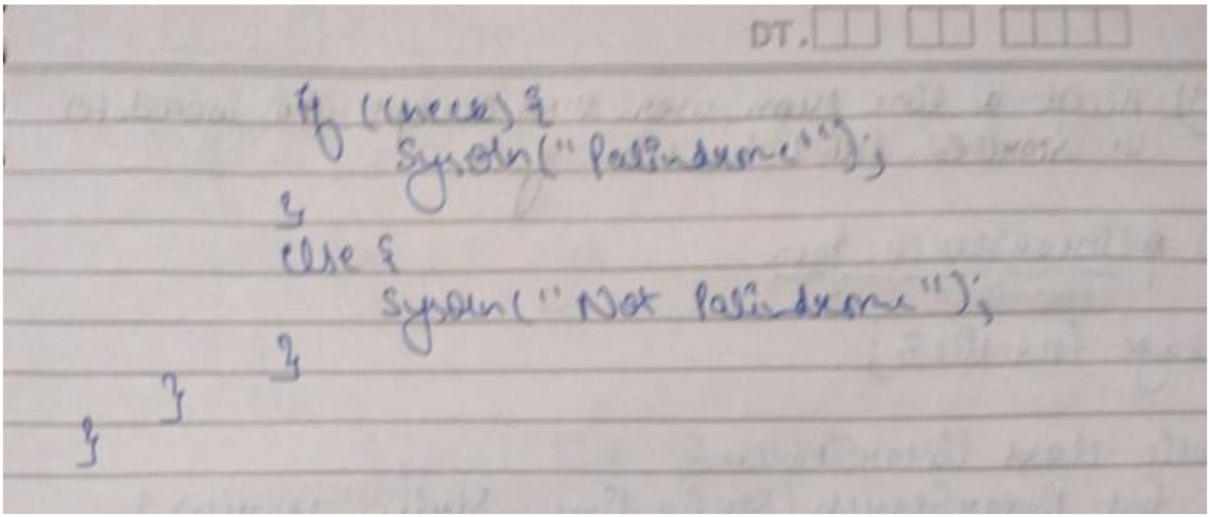


Ans) Palindrome.java

```
package Practice5;

public class Palindrome {
    boolean isPalin(String str){
        for(int i=0; i< str.length()/2 ; i++){
            if (str.charAt(i) != str.charAt(str.length()-i-1)){
                return false;
            }
        }
        return true;
    }
}
```

mainPalin.java

```
package Practice5;
import java.util.Scanner;

public class mainPalin {
    public static void main(String [] args){
            Scanner scn = new Scanner(System.in);
            Sysoln ("Enter string :");
            String str = scn.nextLine();

            Palindrome obj = new Palindrome();
            boolean check = obj.isPalin( str);
```



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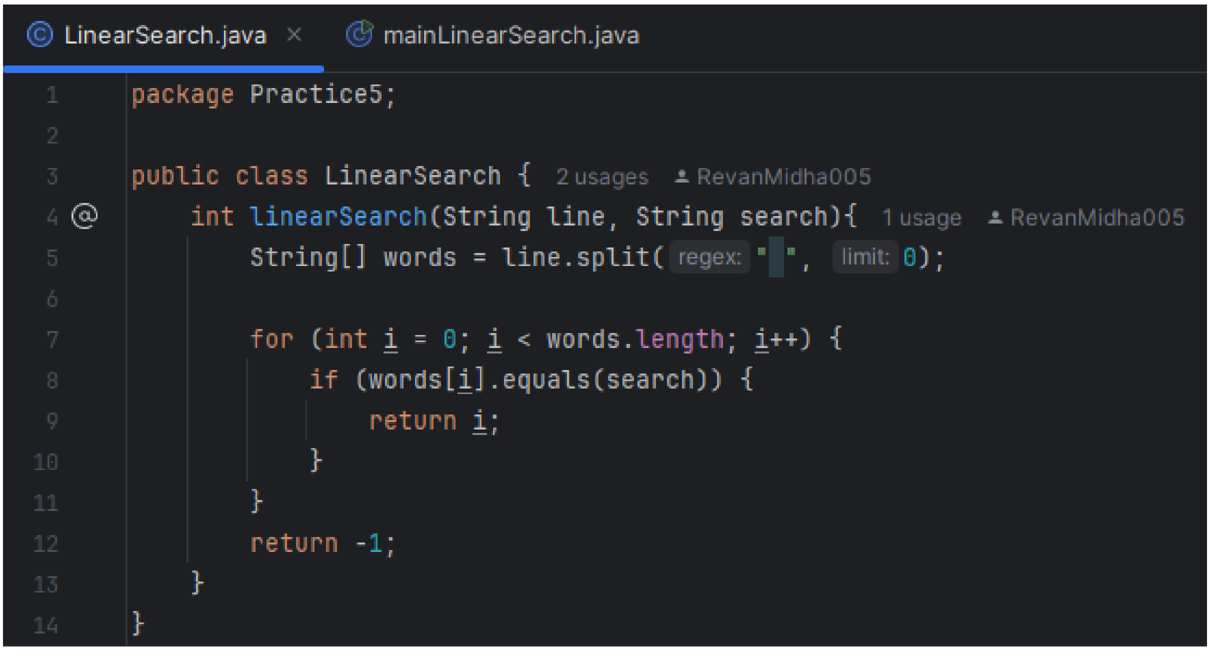
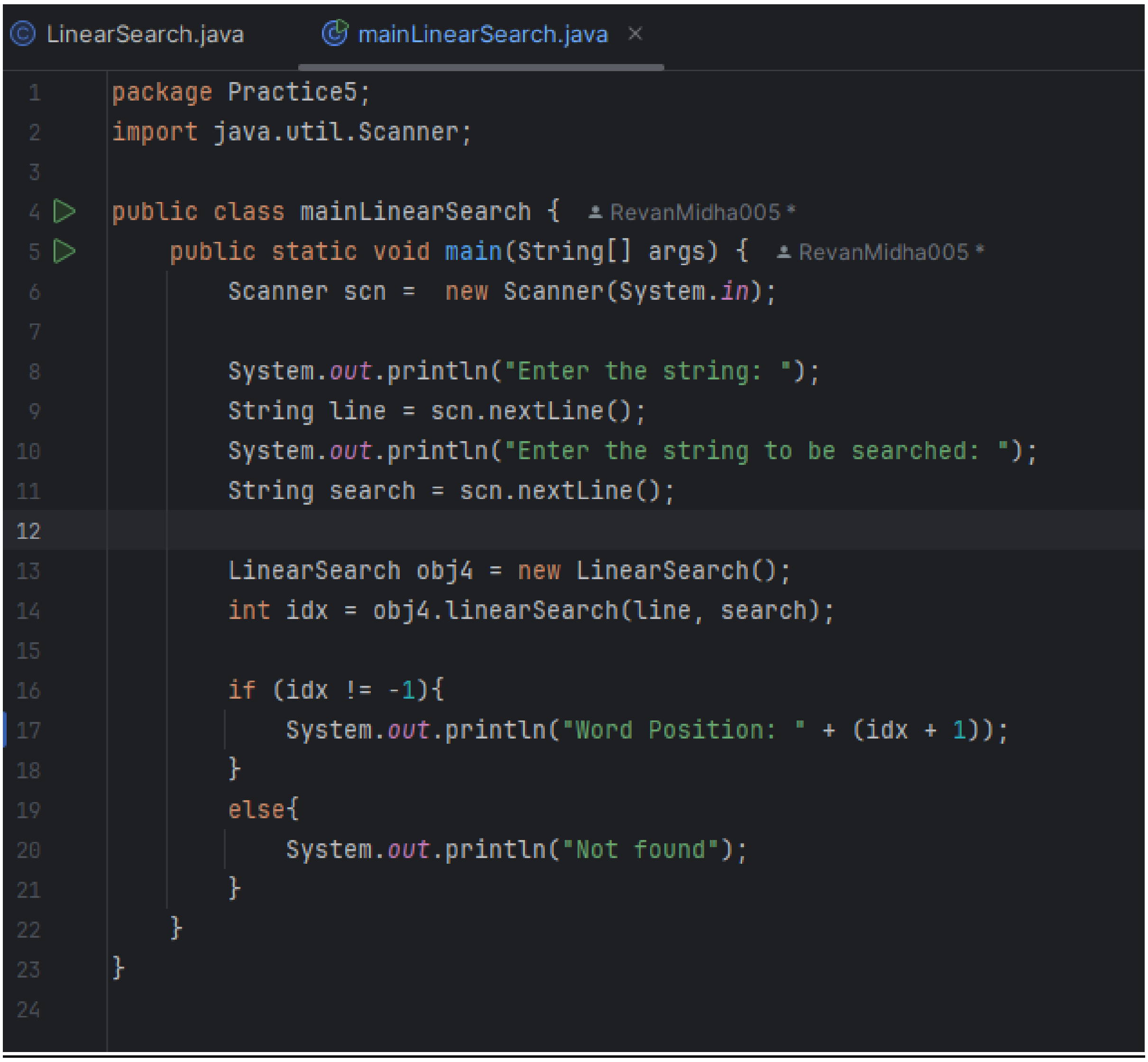
```
if (check) {
    Sysoln("Palindrome");
}
else {
    Sysoln("Not Palindrome");
}
  }
}
```

Q4) Accept a line from user and then accept the word to be searched in it. Print the location of it.

CODE :

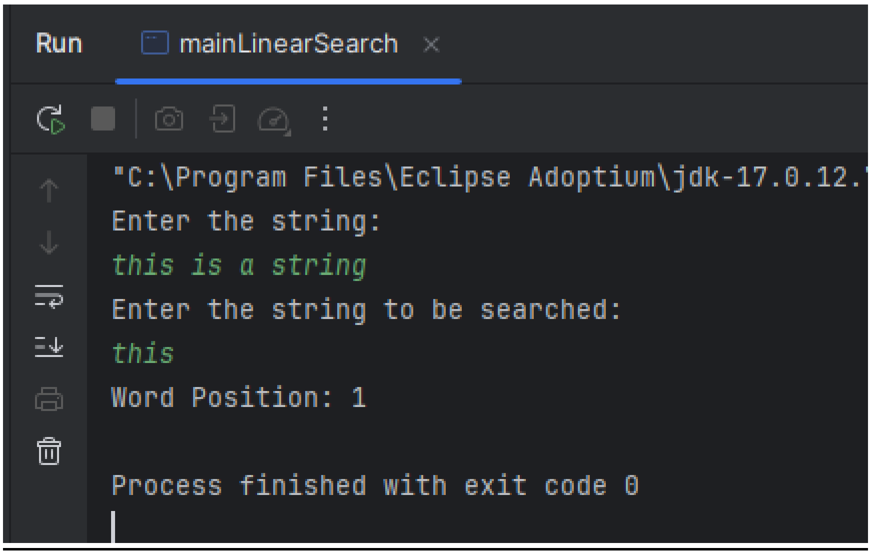


```
package Practice5;

public class LinearSearch {  2 usages  RevanMidha005
    int linearSearch(String line, String search){  1 usage  RevanMidha005
        String[] words = line.split( regex: " ",  limit: 0);

        for (int i = 0; i < words.length; i++) {
            if (words[i].equals(search)) {
                return i;
            }
        }
        return -1;
    }
}
```



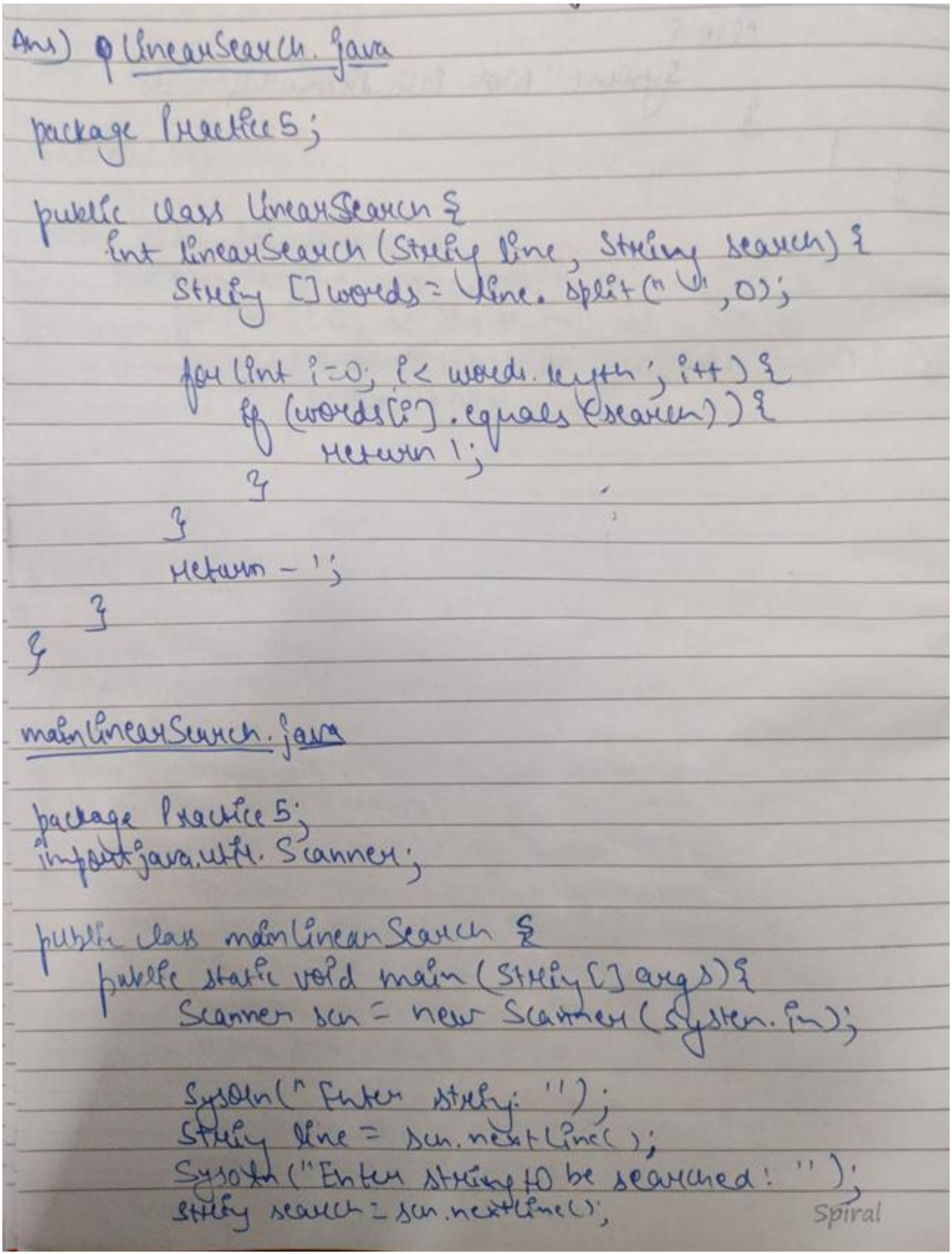
```java
package Practice5;
import java.util.Scanner;

public class mainLinearSearch {
    public static void main(String[] args) {
        Scanner scn =  new Scanner(System.in);

        System.out.println("Enter the string: ");
        String line = scn.nextLine();
        System.out.println("Enter the string to be searched: ");
        String search = scn.nextLine();

        LinearSearch obj4 = new LinearSearch();
        int idx = obj4.linearSearch(line, search);

        if (idx != -1){
            System.out.println("Word Position: " + (idx + 1));
        }
        else{
            System.out.println("Not found");
        }
    }
}

```

OUTPUT :



```
"C:\Program Files\Eclipse Adoptium\jdk-17.0.12.
Enter the string:
this is a string
Enter the string to be searched:
this
Word Position: 1

Process finished with exit code 0
```

HANDWRITTEN :

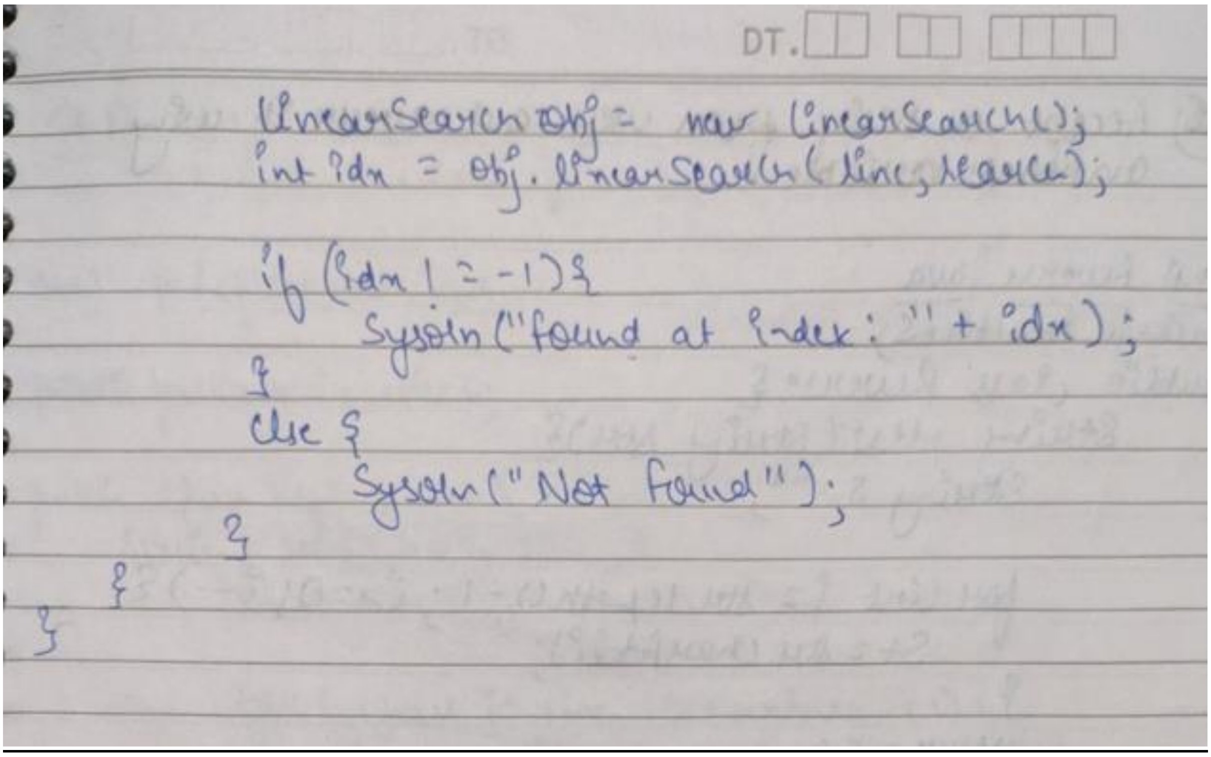


Ans) LinearSearch.java

```
package Practice5;

public class LinearSearch {
    int linearSearch (String line, String search) {
        String [] words = line. split("\\",0);

        for (int i=0; i< words.length; i++) {
            if (words[i].equals(search)) {
                return 1;
            }
        }
        return -1;
    }
}
```

mainLinearSearch.java

```
package Practice5;
import java.util. Scanner;

public class mainLinearSearch {
    public static void main (String[] args){
        Scanner scn = new Scanner(System.in);

        Sysoln(" Enter string: ");
        String line = scn.nextLine( );
        Sysoln("Enter string to be searched: ");
        String search = scn.nextLine();
```

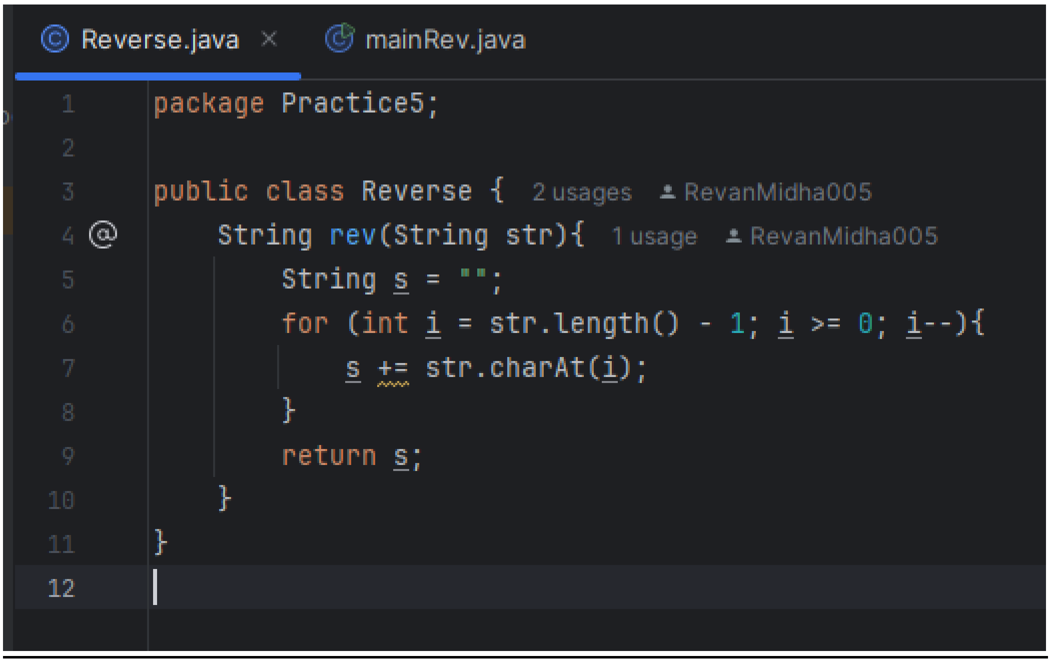


DT.

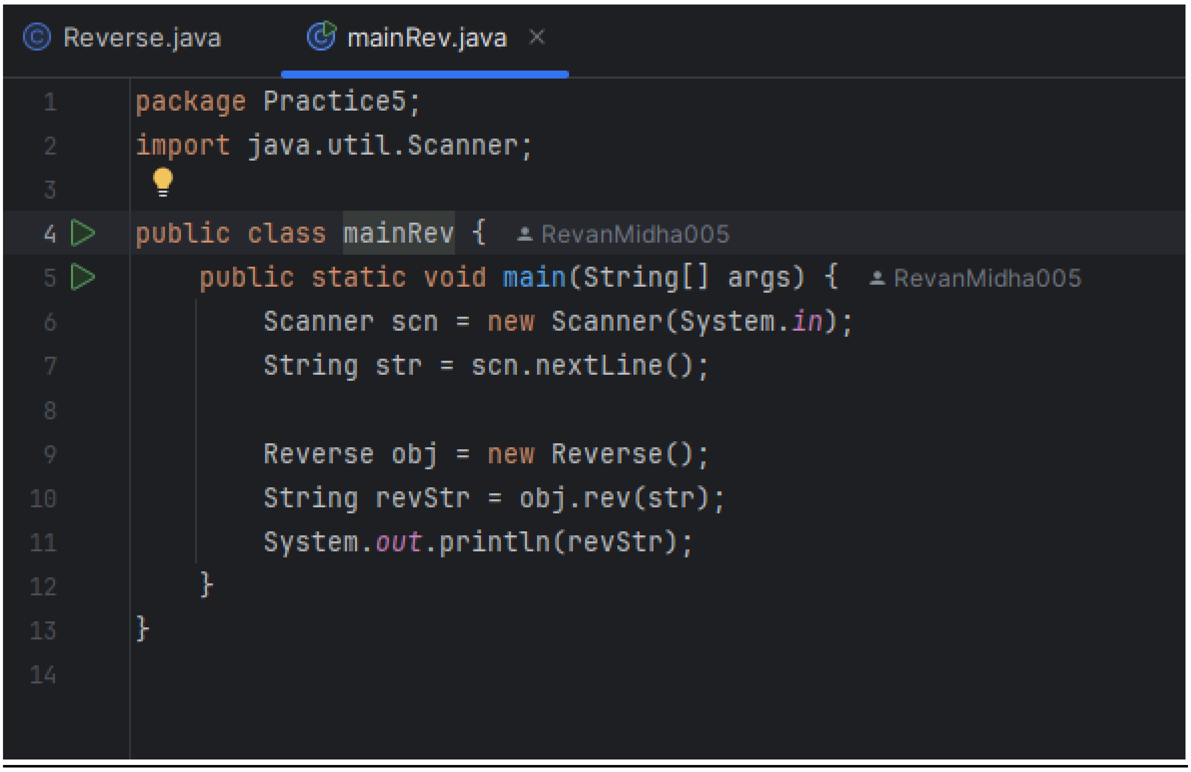
```
linearSearch obj = new linearSearch();
int idx = obj.linearSearch(line, search);

if (idx != -1){
    Sysoln("found at index: "+ idx);
}
else {
    Sysoln("Not found");
  }
 }
}
```

Q5) Accept a String from user and reverse it without using another String variable.

CODE :

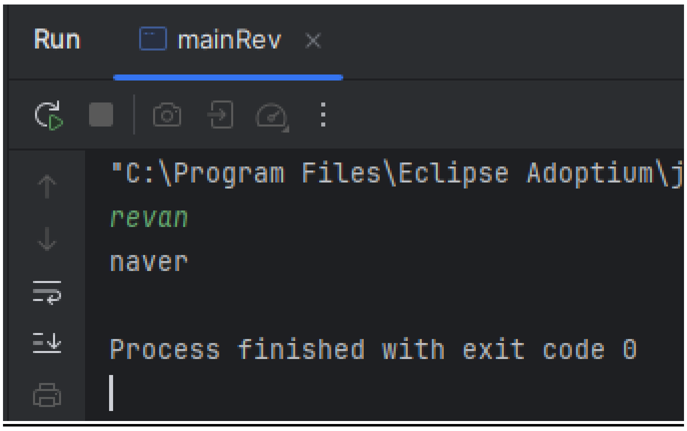


```java
package Practice5;

public class Reverse {
    String rev(String str){
        String s = "";
        for (int i = str.length() - 1; i >= 0; i--){
            s += str.charAt(i);
        }
        return s;
    }
}
```



```java
package Practice5;
import java.util.Scanner;

public class mainRev {
    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        String str = scn.nextLine();

        Reverse obj = new Reverse();
        String revStr = obj.rev(str);
        System.out.println(revStr);
    }
}
```

OUTPUT :



```
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naver

Process finished with exit code 0
```
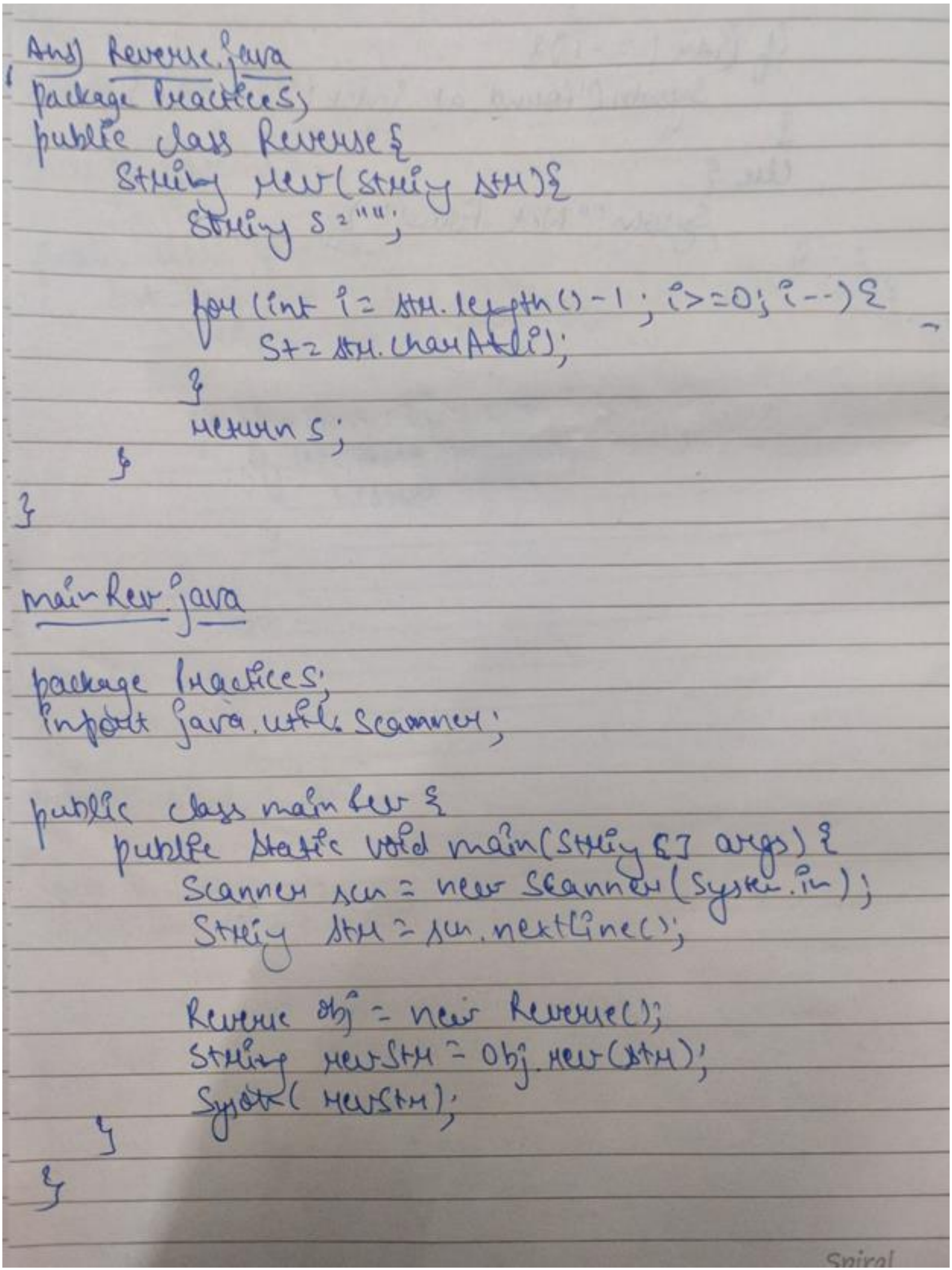

HANDWRITTEN :



Ans) Reverse.java

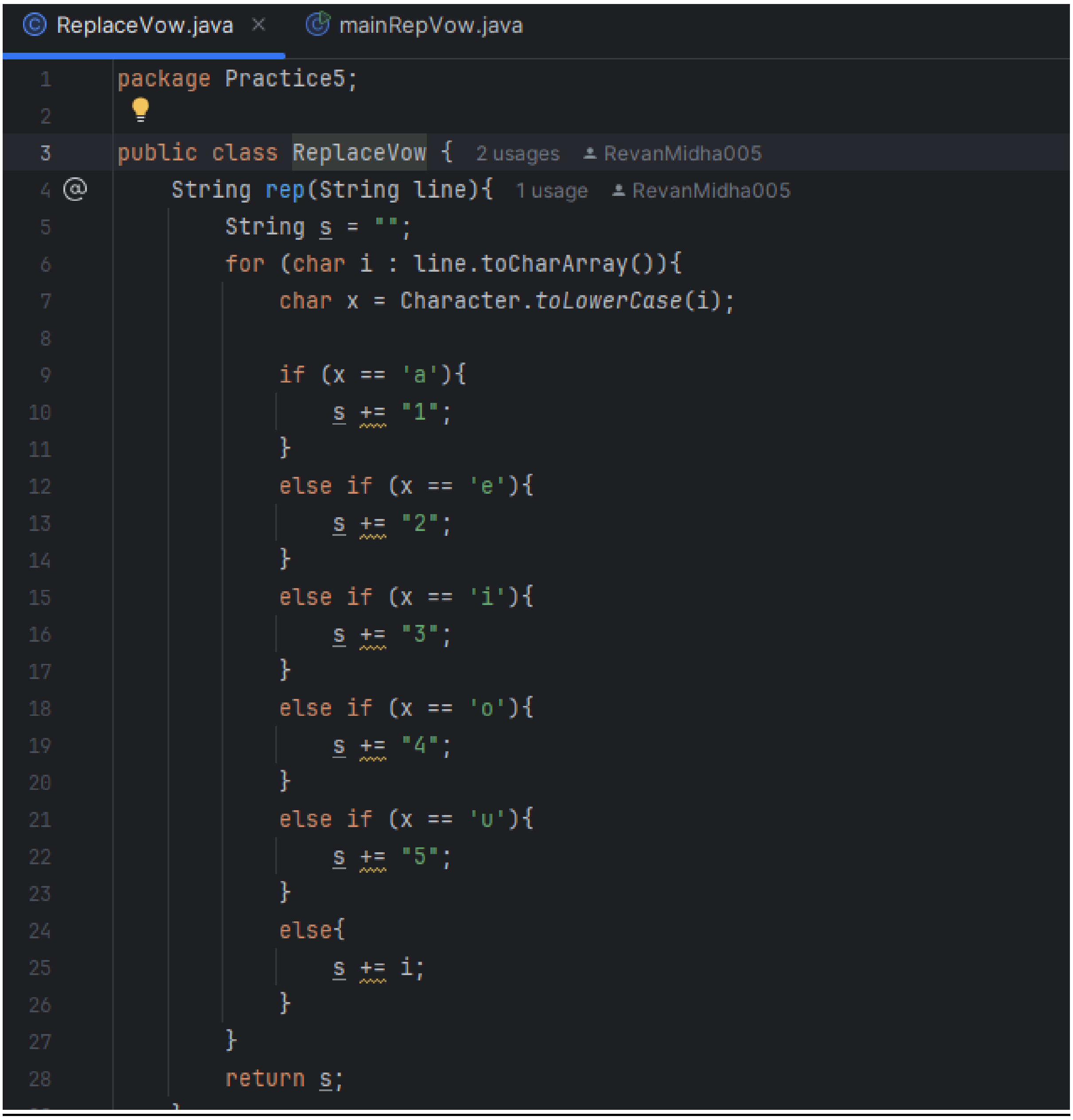
```
package Practices;
public class Reverse{
    String rev(String str){
        String s="";

        for (int i= str.length()-1; i>=0; i--){
            s+= str.charAt(i);
        }
        return s;
    }
}
```

mainRev.java

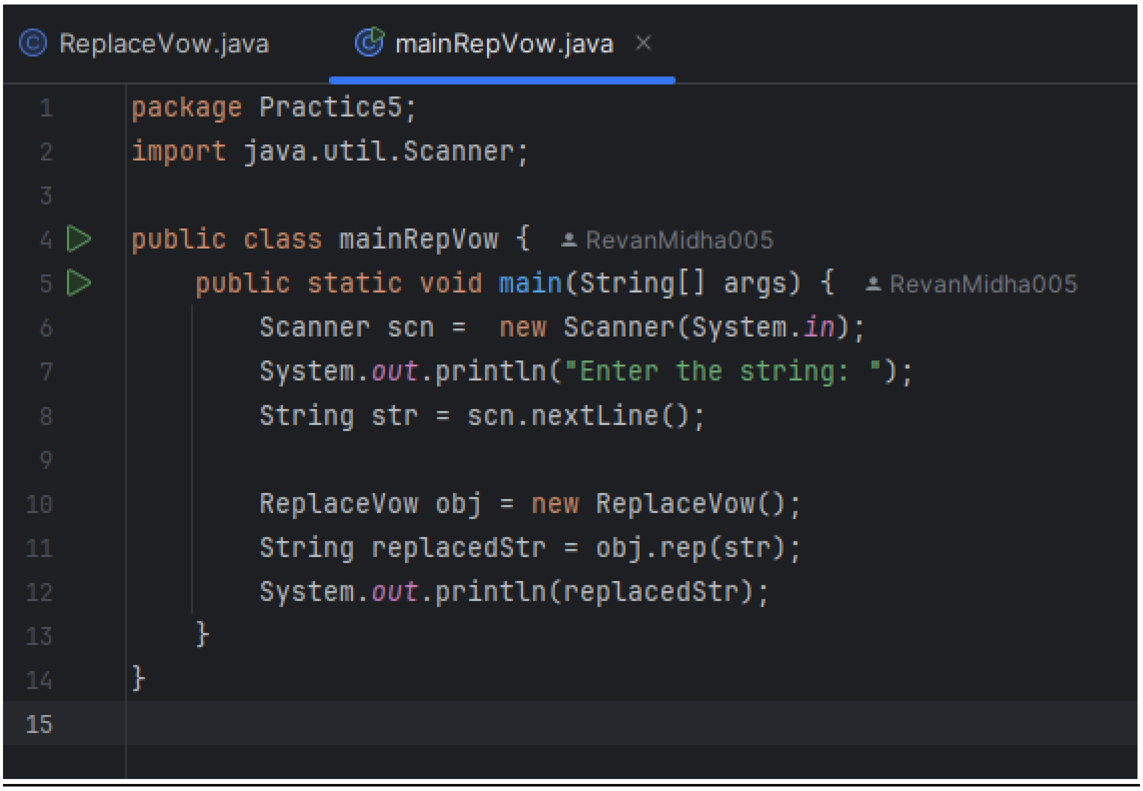
```
package Practices;
import java.util.Scanner;

public class mainRev{
    public static void main(String[] args){
        Scanner scn = new Scanner(System.in);
        String str = scn.nextLine();

        Reverse obj = new Reverse();
        String revStr = obj.rev(str);
        Sysout( revStr);
    }
}
```

Q6) Write a method to take input in two matrix from user and display the product of matrix

CODE :

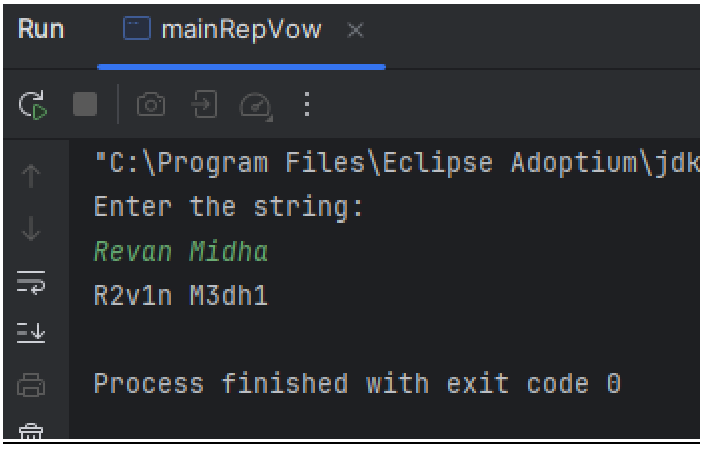


```java
package Practice5;

public class ReplaceVow {
    String rep(String line){
        String s = "";
        for (char i : line.toCharArray()){
            char x = Character.toLowerCase(i);

            if (x == 'a'){
                s += "1";
            }
            else if (x == 'e'){
                s += "2";
            }
            else if (x == 'i'){
                s += "3";
            }
            else if (x == 'o'){
                s += "4";
            }
            else if (x == 'u'){
                s += "5";
            }
            else{
                s += i;
            }
        }
        return s;
```



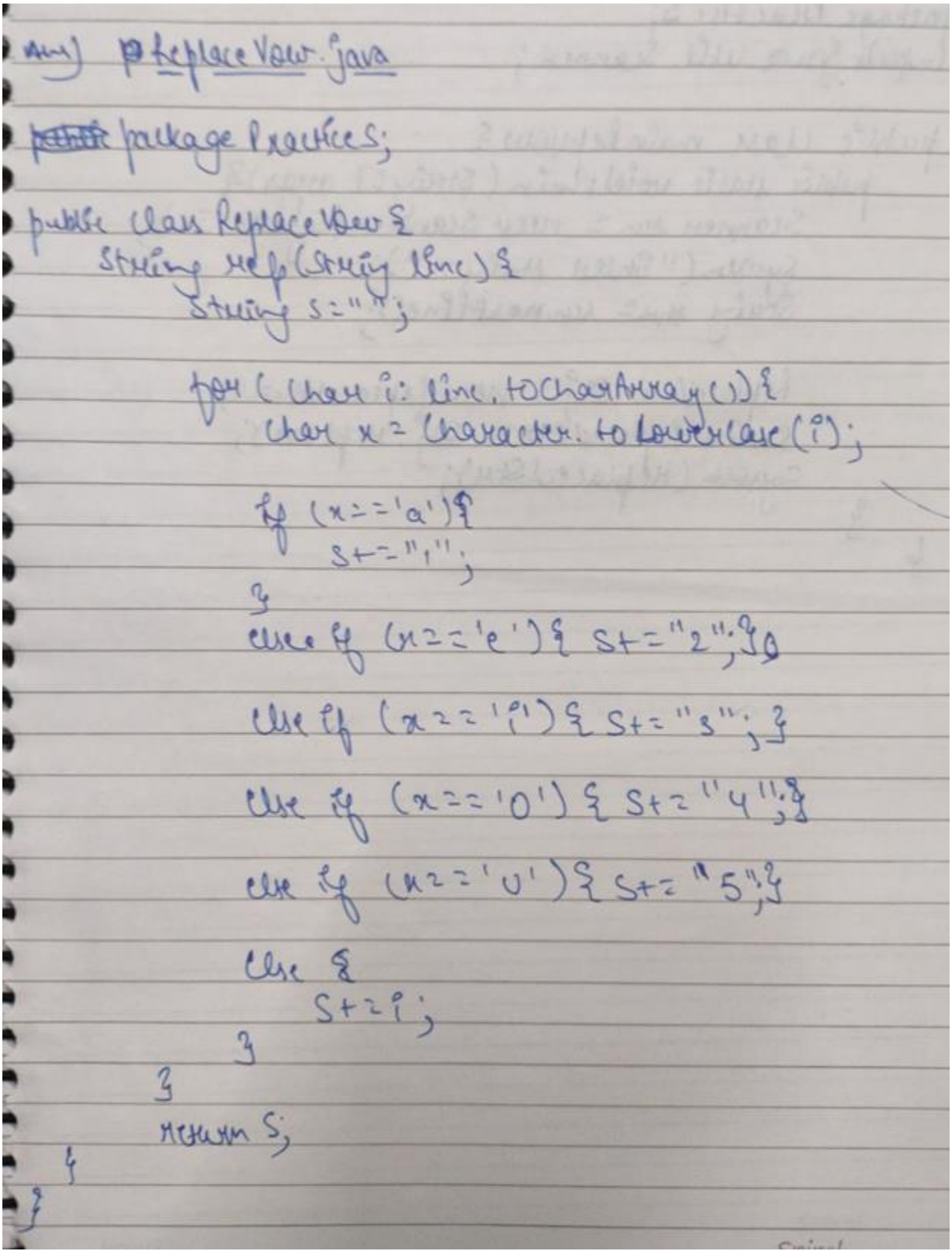
```
package Practice5;
import java.util.Scanner;

public class mainRepVow {  RevanMidha005
    public static void main(String[] args) {  RevanMidha005
        Scanner scn =  new Scanner(System.in);
        System.out.println("Enter the string: ");
        String str = scn.nextLine();

        ReplaceVow obj = new ReplaceVow();
        String replacedStr = obj.rep(str);
        System.out.println(replacedStr);
    }
}

```

OUTPUT :



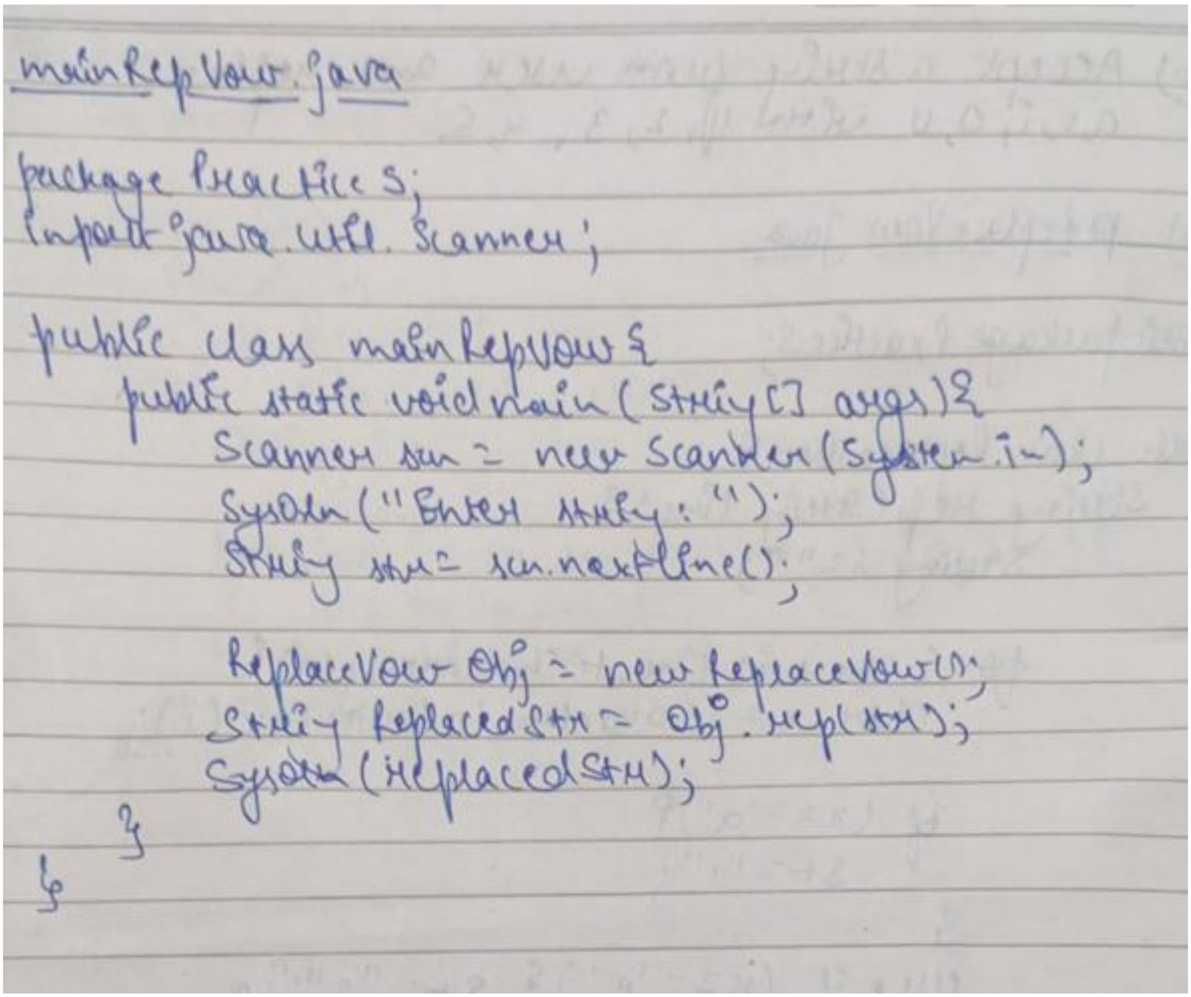
```
"C:\Program Files\Eclipse Adoptium\jdk
Enter the string:
Revan Midha
R2v1n M3dh1

Process finished with exit code 0
```

HANDWRITTEN :



ans) ReplaceVow.java

```
package Practice5;

public class ReplaceVow {
    String rep(String line){
        String s="";

        for( char i: line.toCharArray()){
            char x= Character.toLowerCase(i);

            if (x=='a'){
                s+="1";
            }
            else if (x=='e'){ s+="2";}
            else if (x=='i'){ s+="3";}
            else if (x=='o'){ s+="4";}
            else if (x=='u'){ s+="5";}
            else {
                s+=i;
            }
        }
        return s;
    }
}
```



mainRepVow.java

```
package Practice5;
import java.util.Scanner;

public class mainRepVow {
    public static void main(String[] args){
        Scanner scn = new Scanner(System.in);
        Sysoln("Enter String:");
        String str= scn.nextLine();

        ReplaceVow Obj = new ReplaceVow();
        String replacedStr = Obj.rep(str);
        Sysoln(replacedStr);
    }
}
```