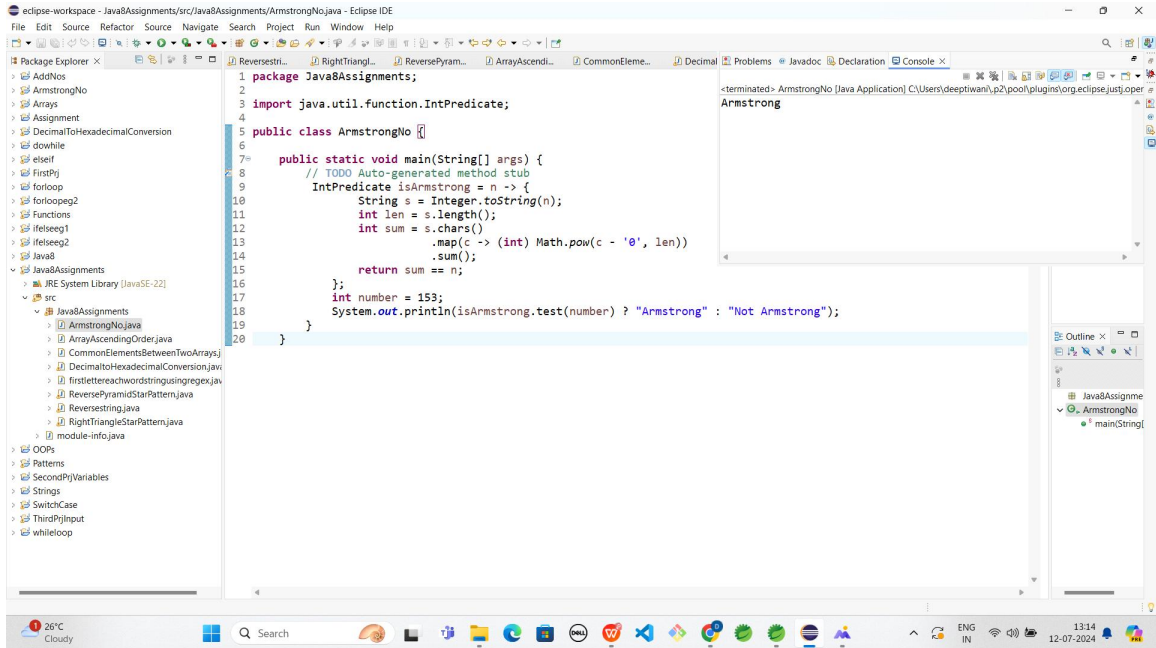


Verinite Technologies Pvt Ltd

Java 8 Basics-Assignment

Program to Check Armstrong Number



```
1 package Java8Assignments;
2
3 import java.util.function.IntPredicate;
4
5 public class ArmstrongNo {
6
7     public static void main(String[] args) {
8         // TODO Auto-generated method stub
9         IntPredicate isArmstrong = n -> {
10             String s = Integer.toString(n);
11             int len = s.length();
12             int sum = s.chars()
13                 .map(c -> (int) Math.pow(c - '0', len))
14                 .sum();
15             return sum == n;
16         };
17         int number = 153;
18         System.out.println(isArmstrong.test(number) ? "Armstrong" : "Not Armstrong");
19     }
20 }
```

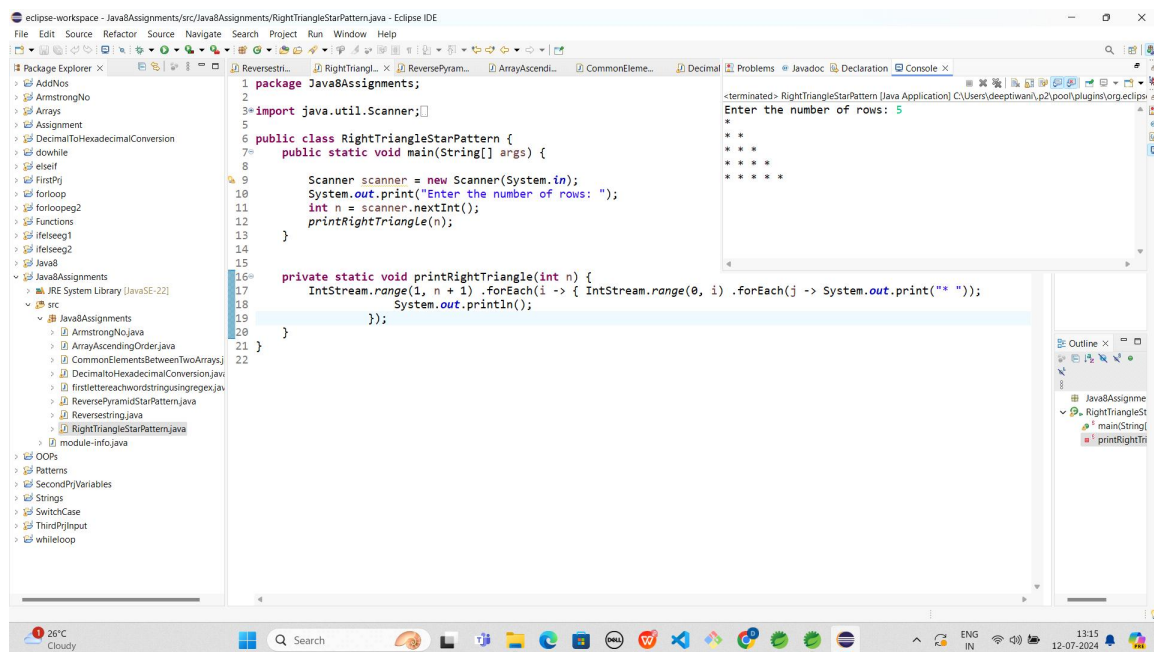
Console Output: <terminated>: ArmstrongNo [Java Application] C:\Users\deepitiwani\p2\pool\plugins\org.eclipse.jdt.launcher\bin\javaw.exe -jar C:\Users\deepitiwani\p2\pool\workspace\Java8Assignments\src\Java8Assignments\ArmstrongNo.jar
Armstrong

Program to Print Right Triangle Star Pattern

Input : n = 5

Output:

```
*  
  
* *  
  
* * *  
  
* * * *  
  
* * * * *
```



The screenshot shows the Eclipse IDE with a Java project named 'Java8Assignments'. The source code for 'RightTriangleStarPattern.java' is displayed in the editor. The code uses a Scanner to take input 'n' (5) and prints a right triangle star pattern. The console output shows the pattern for n=5. The Package Explorer on the left shows the project structure, and the Outline view on the right shows the class structure.

```
1 package Java8Assignments;  
2  
3 import java.util.Scanner;  
4  
5  
6 public class RightTriangleStarPattern {  
7     public static void main(String[] args) {  
8  
9         Scanner scanner = new Scanner(System.in);  
10        System.out.print("Enter the number of rows: ");  
11        int n = scanner.nextInt();  
12        printRightTriangle(n);  
13    }  
14  
15  
16    private static void printRightTriangle(int n) {  
17        IntStream.range(1, n + 1).forEach(i -> { IntStream.range(0, i).forEach(j -> System.out.print(" "));  
18            System.out.println();  
19        });  
20    }  
21 }  
22
```

Console Output:

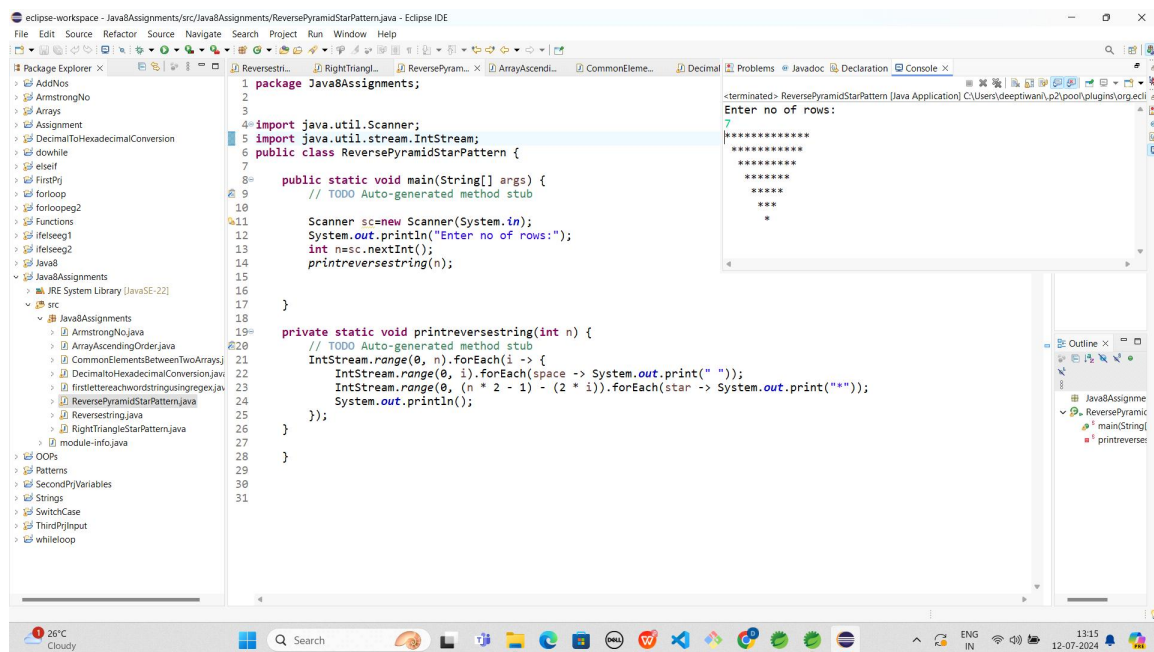
```
<terminated> RightTriangleStarPattern [Java Application] C:\Users\deepptiwani\p2\pools\plugins\org.eclipse.e  
Enter the number of rows: 5  
*  
* *  
* * *  
* * * *  
* * * * *
```

Program to Print Reverse Pyramid Star Pattern

Input: number = 7

Output:

```
*****
*****
*****
*****
****
***
**
*
```



```
1 package Java8Assignments;
2
3
4 import java.util.Scanner;
5 import java.util.stream.IntStream;
6 public class ReversePyramidStarPattern {
7
8     public static void main(String[] args) {
9         // TODO Auto-generated method stub
10
11         Scanner sc=new Scanner(System.in);
12         System.out.println("Enter no of rows:");
13         int n=sc.nextInt();
14         printreversestaring(n);
15
16     }
17
18     private static void printreversestaring(int n) {
19         // TODO Auto-generated method stub
20         IntStream.range(0, n).forEach(i -> {
21             IntStream.range(0, i).forEach(space -> System.out.print(" "));
22             IntStream.range(0, (n * 2 - 1) - (2 * i)).forEach(star -> System.out.print("*"));
23             System.out.println();
24         });
25     }
26 }
27
28
29
30
31
```

Console Output:

```
<terminated> ReversePyramidStarPattern [Java Application] C:\Users\deepitwani\p2\pool\plugins\org.eclipse
Enter no of rows:
7
*****
*****
*****
*****
****
***
**
*
```

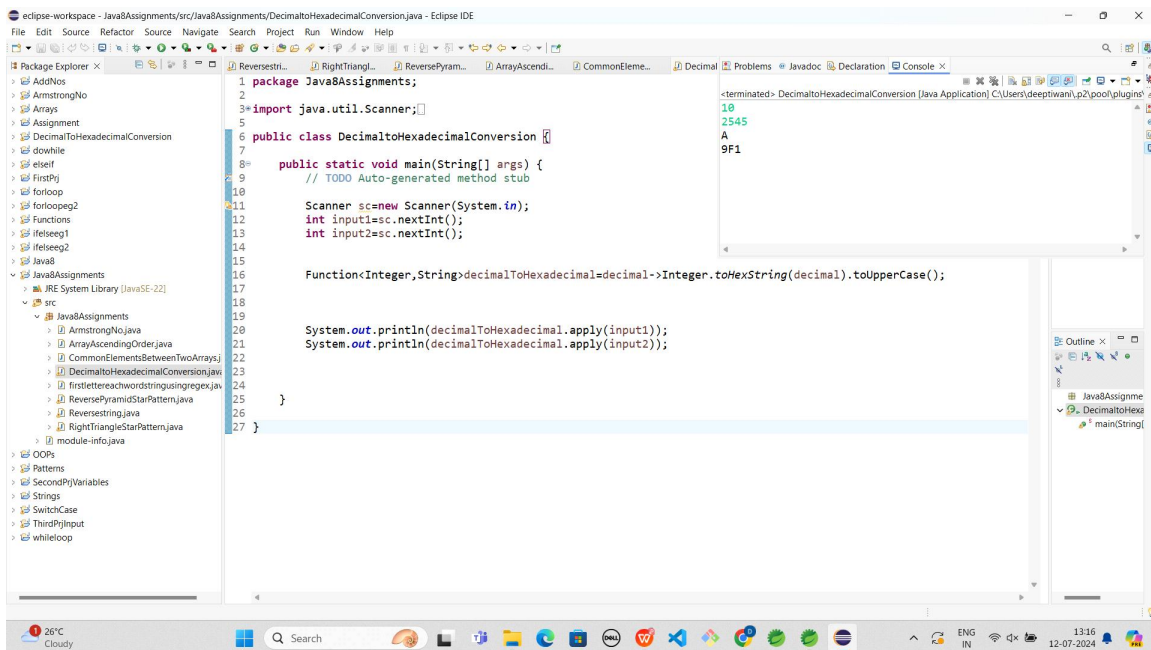
Program For Decimal to Hexadecimal Conversion

Input : 10

Output: A

Input : 2545

Output: 9F1



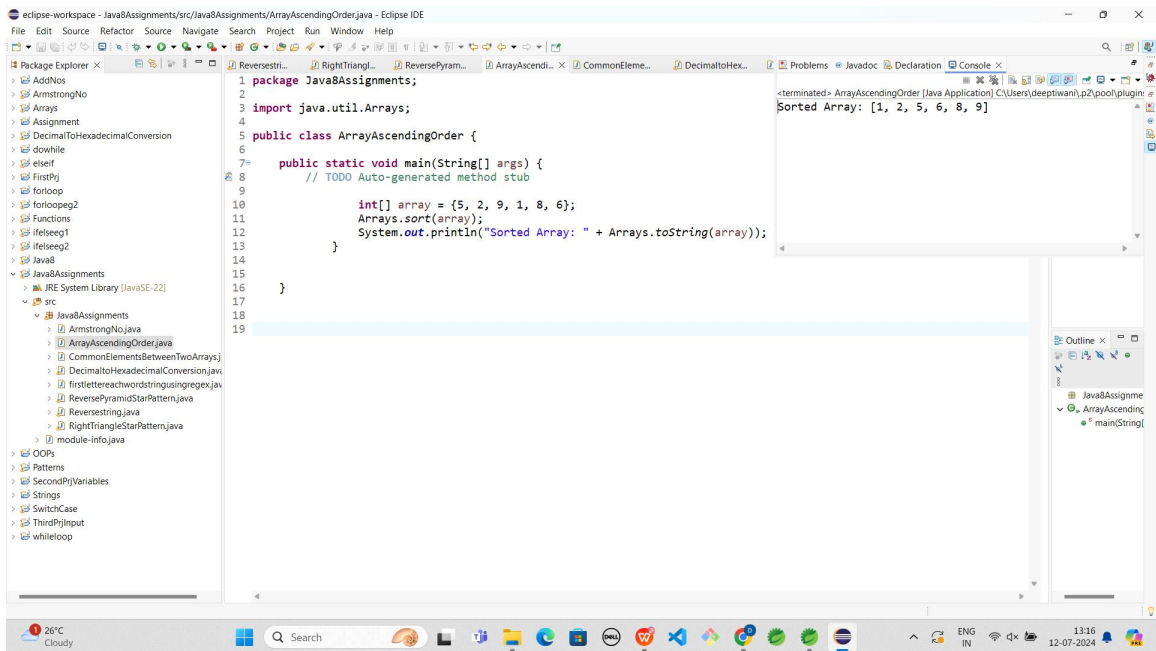
The screenshot shows the Eclipse IDE interface. The Package Explorer on the left lists the project structure, including 'Java8Assignments' and 'DecimalToHexadecimalConversion'. The main editor displays the source code for 'DecimalToHexadecimalConversion.java'. The code uses a Scanner to take two inputs, 10 and 2545, and prints their hexadecimal equivalents, A and 9F1, respectively. The Console window on the right shows the program's output.

```
1 package Java8Assignments;
2
3 import java.util.Scanner;
4
5
6 public class DecimalToHexadecimalConversion {
7
8     public static void main(String[] args) {
9         // TODO Auto-generated method stub
10
11         Scanner sc=new Scanner(System.in);
12         int input1=sc.nextInt();
13         int input2=sc.nextInt();
14
15
16         Function<Integer,String>decimalToHexadecimal=decimal->Integer.toHexString(decimal).toUpperCase();
17
18
19         System.out.println(decimalToHexadecimal.apply(input1));
20         System.out.println(decimalToHexadecimal.apply(input2));
21
22     }
23 }
24
25
26
27 }
```

Console Output:

```
<terminated> DecimalToHexadecimalConversion [Java Application] C:\Users\deepdwani\p2\pooh\plugins\
10
2545
A
9F1
```

Program to Sort the Elements of an Array in Ascending Order



The screenshot displays the Eclipse IDE interface. The Package Explorer on the left shows a project named 'Java8Assignments' with a source folder 'src' containing several Java files, including 'ArrayAscendingOrder.java'. The main editor window shows the code for 'ArrayAscendingOrder.java'.

```
1 package Java8Assignments;
2
3 import java.util.Arrays;
4
5 public class ArrayAscendingOrder {
6
7     // TODO Auto-generated method stub
8
9     public static void main(String[] args) {
10         int[] array = {5, 2, 9, 1, 8, 6};
11         Arrays.sort(array);
12         System.out.println("Sorted Array: " + Arrays.toString(array));
13     }
14 }
15
16
17
18
19
```

The Console window on the right shows the output of the program: "Sorted Array: [1, 2, 5, 6, 8, 9]". The Outline window on the bottom right shows the class structure: 'Java8Assignme' containing 'ArrayAscending' and 'main(String[])'.

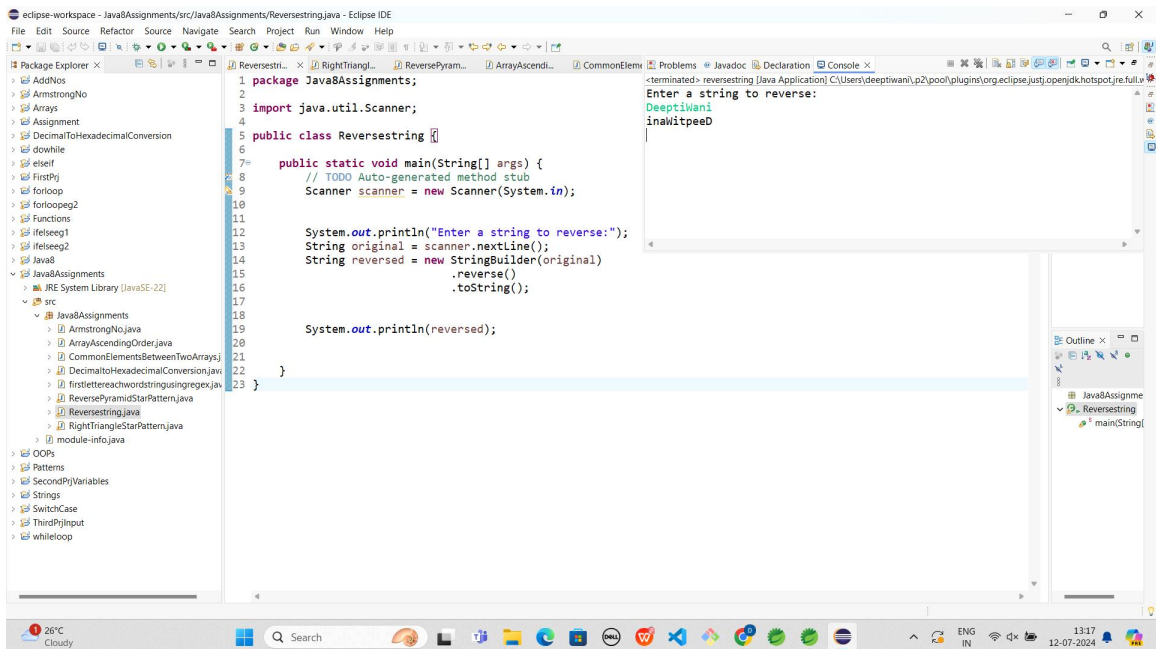
Program to Find Common Elements Between Two Arrays

The screenshot displays the Eclipse IDE with a Java project named 'Java8Assignments'. The package explorer on the left shows the project structure, including a 'src' folder with 'Java8Assignments' and 'CommonElementsBetweenTwoArrays.java'. The main editor shows the following code:

```
1 package Java8Assignments;
2 import java.util.Set;
3
4
5
6 public class CommonElementsBetweenTwoArrays {
7
8
9
10     // TODO Auto-generated method stub
11
12
13     Integer[] array1= {1,2,3,4,5,6};
14     Integer[] array2= {6,4,7,3,8,1};
15
16     Set<Integer> set1=new HashSet<>(Arrays.asList(array1));
17     Set<Integer> set2=new HashSet<>(Arrays.asList(array2));
18
19
20     Set<Integer> commonElements=set1.stream().filter(set2::contains).collect(Collectors.toSet());
21
22     System.out.println(commonElements);
23 }
24
25
26
```

The console on the right shows the output of the program: `[1, 3, 4, 6]`. The status bar at the bottom indicates the system is at 26°C, cloudy, and the date is 12-07-2024.

Reverse a string in Java



The screenshot shows the Eclipse IDE with a Java project named 'Java8Assignments'. The 'src' folder contains several Java files, including 'ReverseString.java'. The code in 'ReverseString.java' is as follows:

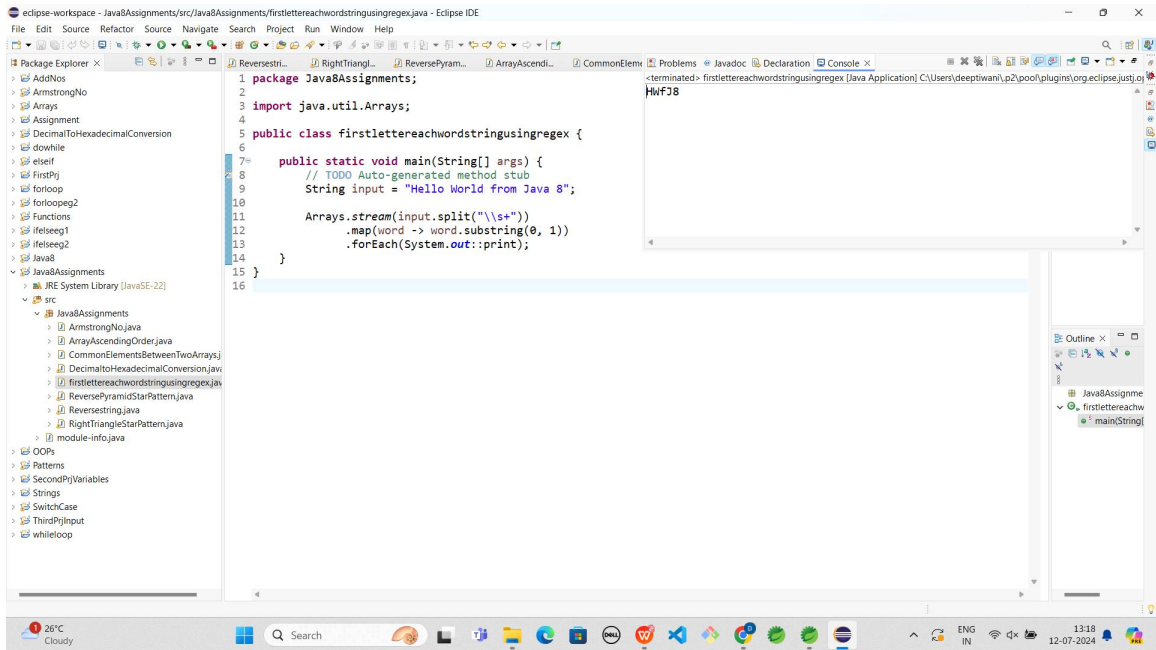
```
1 package Java8Assignments;
2
3 import java.util.Scanner;
4
5 public class ReverseString {
6
7     public static void main(String[] args) {
8         // TODO Auto-generated method stub
9         Scanner scanner = new Scanner(System.in);
10
11         System.out.println("Enter a string to reverse:");
12         String original = scanner.nextLine();
13         String reversed = new StringBuilder(original)
14             .reverse()
15             .toString();
16
17         System.out.println(reversed);
18     }
19 }
20
21
22
23 }
```

The console output shows the program running and displaying the reversed string:

```
<terminated> reverseString (Java Application) C:\Users\deepitiwani\p2\pool\plugins\org.eclipse.jdt.openjdk.hotspot.jre.full.w...
Enter a string to reverse:
DeeptiWani
inawitpeeD
```

The bottom status bar shows the system temperature as 26°C, the date as 12-07-2024, and the time as 13:17.

Print first letter of each word in a string using regex



The screenshot shows the Eclipse IDE interface. The Package Explorer on the left lists the project structure, including the package `Java8Assignments` and its sub-packages. The main editor displays the source code for `firstlettereachwordstringusingregex.java`. The code is as follows:

```
1 package Java8Assignments;
2
3 import java.util.Arrays;
4
5 public class firstlettereachwordstringusingregex {
6
7     public static void main(String[] args) {
8         // TODO: Auto-generated method stub
9         String input = "Hello World from Java 8";
10
11         Arrays.stream(input.split("\\s+"))
12             .map(word -> word.substring(0, 1))
13             .forEach(System.out::print);
14     }
15 }
16
```

The Console on the right shows the output of the program, which is `HwFJ8`. The Outline view on the bottom right shows the class `firstlettereachw` and its method `main(String[] args)`.