**Patuakhali Science and Technology University**



**Lab Problem 02**

(Java Basic Exercises)

Course Code: CCE 122

Course Title: Object Oriented Programming Sessional

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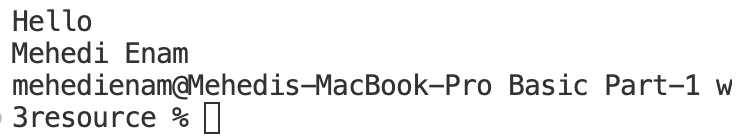
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# **1.** Write a Java program to print 'Hello' on screen and your name on a separate line.

Code:

|  |
| --- |
| public class one {  public static void main(String[] args) {  System.out.println("Hello\nMehedi Enam");  }  } |

Output:



# **2.** Write a Java program to print the sum of two numbers.

Code:

|  |
| --- |
| public class two {  public static void main(String[] args) {  System.out.println(74 + 36);  }  } |

Output:

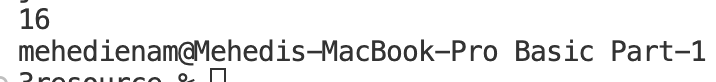


# **3.** Write a Java program to divide two numbers and print them on the screen.

Code:

|  |
| --- |
| public class three {  public static void main(String[] args) {  System.out.println(50/3);  }  } |

Output:

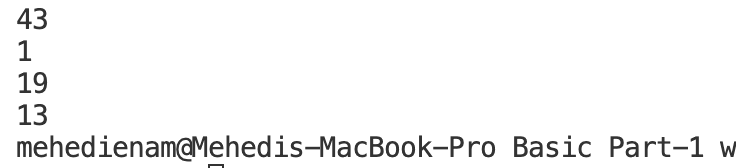


# **4.** Write a Java program to print the results of the following operations.

Code:

|  |
| --- |
| public class four {  public static void main(String[] args) {  System.out.println(-5 + 8 \* 6);  System.out.println((55+9) % 9);  System.out.println(20 + -3\*5 / 8);  System.out.println(5 + 15 / 3 \* 2 - 8 % 3);  }  } |

Output:

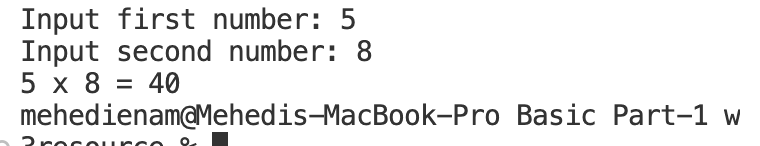


# **5.** Write a Java program that takes two numbers as input and displays the product of two numbers.

Code:

|  |
| --- |
| import java.util.Scanner;  public class five {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int a, b;  System.out.print("Input first number: ");  a = input.nextInt();  System.out.print("Input second number: ");  b = input.nextInt();  System.out.printf("%d x %d = %d\n", a, b, a\*b);  }  } |

Output:

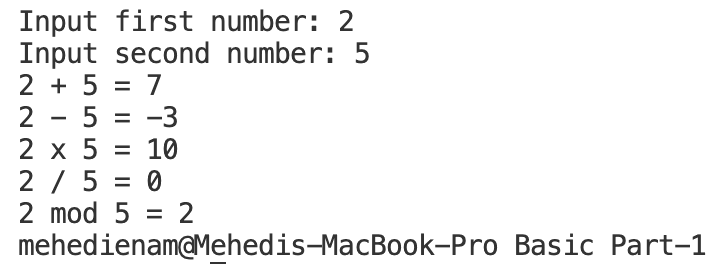


# **6.** Write a Java program to print the sum (addition), multiply, subtract, divide and remainder of two numbers.

Code:

|  |
| --- |
| import java.util.Scanner;  public class six {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int a, b;  System.out.print("Input first number: ");  a = input.nextInt();  System.out.print("Input second number: ");  b = input.nextInt();  System.out.printf("%d + %d = %d\n", a, b, a+b);  System.out.printf("%d - %d = %d\n", a, b, a-b);  System.out.printf("%d x %d = %d\n", a, b, a\*b);  System.out.printf("%d / %d = %d\n", a, b, a/b);  System.out.printf("%d mod %d = %d\n", a, b, a%b);  }  } |

Output:

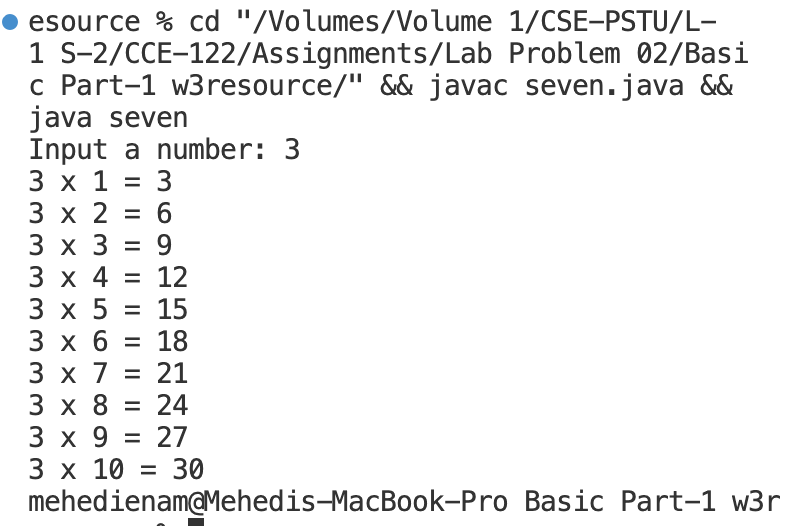


# **7.** Write a Java program that takes a number as input and prints its multiplication table up to 10.

Code:

|  |
| --- |
| import java.util.Scanner;  public class seven {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int a;  System.out.print("Input a number: ");  a = input.nextInt();  for (int i = 1; i <= 10; i++) {  System.out.printf("%d x %d = %d\n", a, i, a\*i);  }  }  } |

Output:



8. Write a Java program to display the following pattern.   
*Sample Pattern :*

J a v v a

J a a v v a a

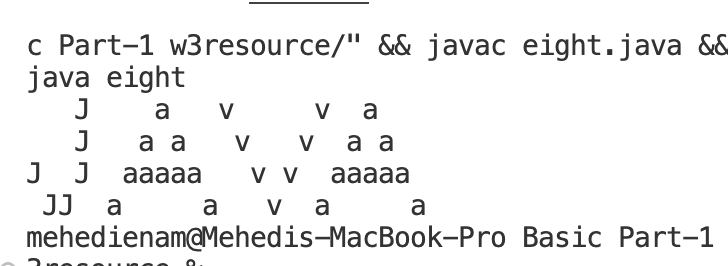
J J aaaaa V V aaaaa

JJ a a V a a

Code:

|  |
| --- |
| public class eight {  public static void main(String[] args) {  System.out.println(" J a v v a");  System.out.println(" J a a v v a a");  System.out.println("J J aaaaa v v aaaaa");  System.out.println(" JJ a a v a a");  }  } |

Output:

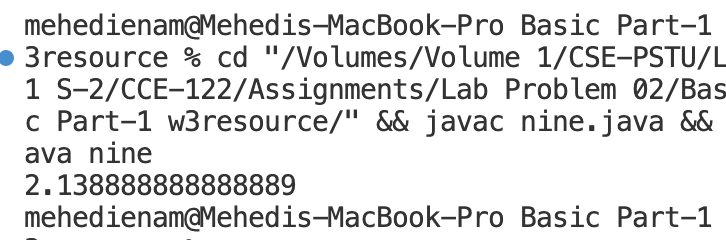


# **9.** Write a Java program to compute the specified expressions and print the output.

Code:

|  |
| --- |
| public class nine {  public static void main(String[] args) {  System.out.println(((25.5 \* 3.5 - 3.5 \* 3.5) / (40.5 - 4.5)));  }  } |

Output:

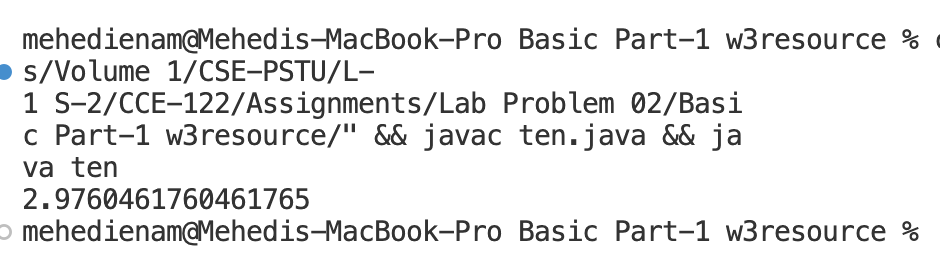


10. Write a Java program to compute a specified formula.   
*Specified Formula :*  
4.0 \* (1 - (1.0/3) + (1.0/5) - (1.0/7) + (1.0/9) - (1.0/11))

Code:

|  |
| --- |
| public class ten {  public static void main(String[] args) {  System.out.println(4.0 \* (1 - (1.0/3) + (1.0/5) - (1.0/7) + (1.0/9) - (1.0/11)));  }  } |

Output:

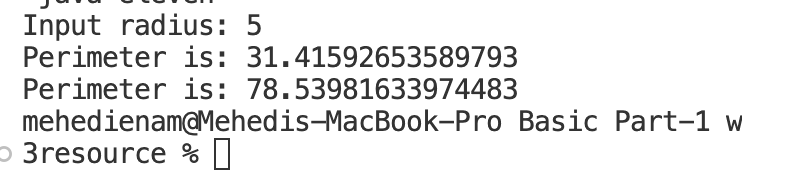


# **11.** Write a Java program to print the area and perimeter of a circle.

Code:

|  |
| --- |
| import java.util.Scanner;  public class eleven {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  double r;  System.out.print("Input radius: ");  r = input.nextDouble();  System.out.println("Perimeter is: " + (2\*Math.PI\*r));  System.out.println("Perimeter is: " + (Math.PI\*r\*r));  }  } |

Output:

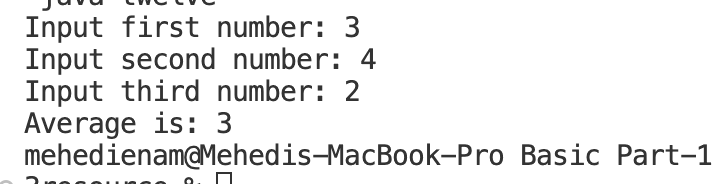


# **12.** Write a Java program that takes three numbers as input to calculate and print the average of the numbers.

Code:

|  |
| --- |
| import java.util.Scanner;  public class twelve {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int a, b, c;  System.out.print("Input first number: ");  a = input.nextInt();  System.out.print("Input second number: ");  b = input.nextInt();  System.out.print("Input third number: ");  c = input.nextInt();  System.err.println("Average is: " + (a+b+c) / 3);  }  } |

Output:

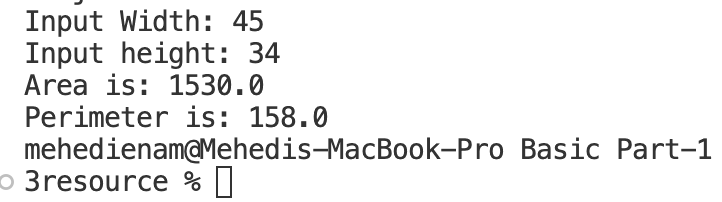


# **13.** Write a Java program to print the area and perimeter of a rectangle.

Code:

|  |
| --- |
| import java.util.Scanner;  public class thirteen {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  double a, b;  System.out.print("Input Width: ");  a = input.nextDouble();  System.out.print("Input height: ");  b = input.nextDouble();  System.err.println("Area is: " + (a\*b));  System.err.println("Perimeter is: " + 2\*(a+b));  }  } |

Output:



14. Write a Java program to print an American flag on the screen.   
Expected Output

\* \* \* \* \* \* ==================================

\* \* \* \* \* ==================================

\* \* \* \* \* \* ==================================

\* \* \* \* \* ==================================

\* \* \* \* \* \* ==================================

\* \* \* \* \* ==================================

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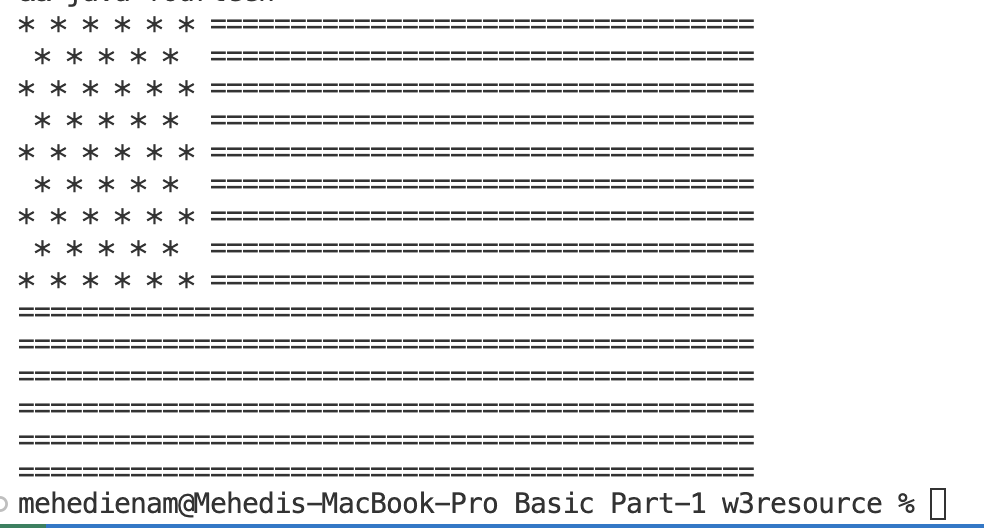
==============================================

==============================================

Code:

|  |
| --- |
| public class fourteen {  public static void main(String[] args) {  System.out.println("\* \* \* \* \* \* ==================================\n \* \* \* \* \* ==================================\n\* \* \* \* \* \* ================================== \n \* \* \* \* \* ================================== \n\* \* \* \* \* \* ================================== \n \* \* \* \* \* ================================== \n\* \* \* \* \* \* ================================== \n \* \* \* \* \* ================================== \n\* \* \* \* \* \* ================================== \n==============================================\n==============================================\n==============================================\n==============================================\n==============================================\n==============================================");  }  } |

Output:

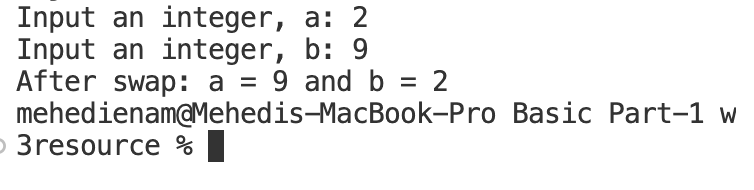


# **15.** Write a Java program to swap two variables.

Code:

|  |
| --- |
| import java.util.Scanner;  public class fifteen {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int a, b, temp;  System.out.print("Input an integer, a: ");  a = input.nextInt();  System.out.print("Input an integer, b: ");  b = input.nextInt();  temp = a;  a = b;  b = temp;  System.out.printf("After swap: a = %d and b = %d\n", a, b);  }  } |

Output:



16. Write a Java program to print a face.   
Expected Output

+"""""+

[| o o |]

| ^ |

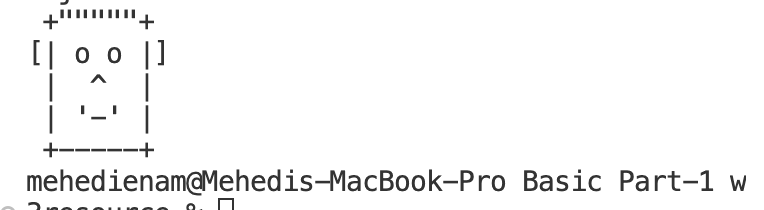
| '-' |

+-----+

Code:

|  |
| --- |
| public class sixteen {  public static void main(String[] args) {  System.out.println(" +\"\"\"\"\"+\n[| o o |]\n | ^ |\n | '-' |\n +-----+");  }  } |

Output:



# **17.** Write a Java program to add two binary numbers.

Code:

|  |
| --- |
|  |

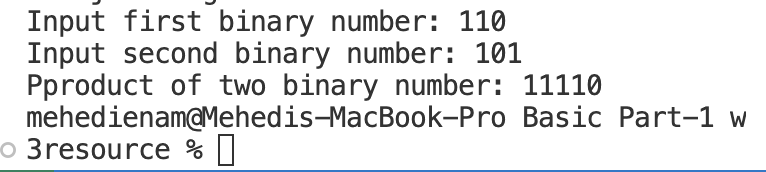
Output:

# **18.** Write a Java program to multiply two binary numbers.

Code:

|  |
| --- |
| import java.util.Scanner;  public class eightteen {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int a, b;  System.out.print("Input first binary number: ");  a = input.nextInt();  System.out.print("Input second binary number: ");  b = input.nextInt();  System.out.println("Pproduct of two binary number: "+ (a\*b));  }  } |

Output:

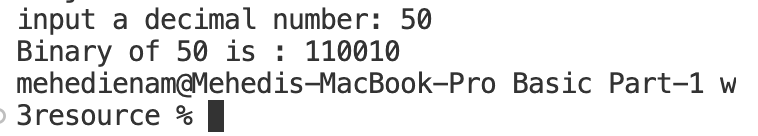


# **19.** Write a Java program to convert an integer number to a binary number.

Code:

|  |
| --- |
| import java.util.Scanner;  public class nineteen {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int decimal;  System.out.print("input a decimal number: ");  decimal = input.nextInt();  System.out.println("Binary of "+ decimal+" is : " + Integer.toBinaryString(decimal));  }  } |

Output:

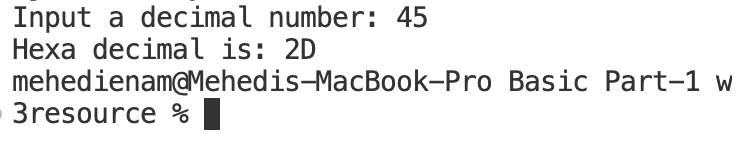


# **20.** Write a Java program to convert a decimal number to a hexadecimal number.

Code:

|  |
| --- |
| import java.util.Scanner;  public class twenty {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int a;  System.out.print("Input a decimal number: ");  a = input.nextInt();  System.err.println("Hexa decimal is: " + Integer.toHexString(a).toUpperCase());  }  } |

Output:

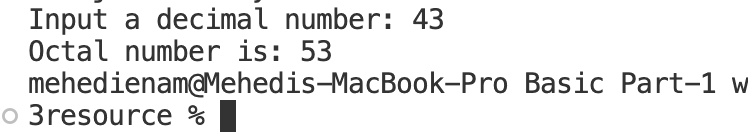


# **21.** Write a Java program to convert a decimal number to an octal number.

Code:

|  |
| --- |
| import java.util.Scanner;  public class twentyone {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int a;  System.out.print("Input a decimal number: ");  a = input.nextInt();  System.out.println("Octal number is: " + Integer.toOctalString(a));  }  } |

Output:

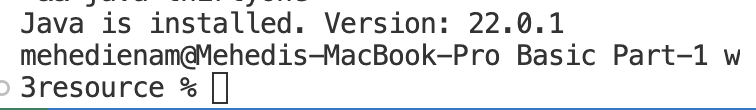


# **31.** Write a Java program to check whether Java is installed on your computer.

Code:

|  |
| --- |
| public class thirtyone {  public static void main(String[] args) {  String javaVersion = System.getProperty("java.version");  if (javaVersion != null) {  System.out.println("Java is installed. Version: " + javaVersion);  }  else {  System.out.println("Java version could not be detected.");  }  }  } |

Output:

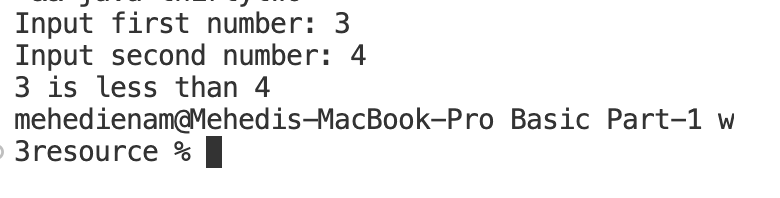


# **32.** Write a Java program to compare two numbers.

Code:

|  |
| --- |
| import java.util.Scanner;  public class thirtytwo {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int a, b, c;  System.out.print("Input first number: ");  a = input.nextInt();  System.out.print("Input second number: ");  b = input.nextInt();  if (a == b) {  System.out.println(a + " is equal to " + b);  }  else if (a > b) {  System.out.println(a + " is greater than " + b);  }  else {  System.out.println(a + " is less than " + b);  }  }  } |

Output:

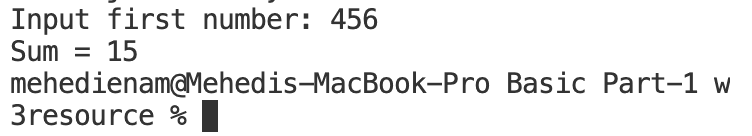


# **33.** Write a Java program and compute the sum of an integer's digits.

Code:

|  |
| --- |
| import java.util.Scanner;  public class thirtythree {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int a, sum = 0, temp;  System.out.print("Input first number: ");  a = input.nextInt();  for (int i = 0; a > 0; i++) {  temp = a % 10;  sum += temp;  a -= temp;  a /= 10;  }  System.out.println(“Sum = ” + sum);  }  } |

Output:

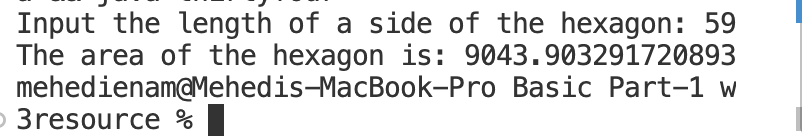


# **34.** Write a Java program to compute hexagon area.  Area of a hexagon = (6 \* s^2)/(4\*tan(π/6)) where s is the length of a side

Code:

|  |
| --- |
| import java.util.Scanner;  public class thirtyfour {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int s;  System.out.print("Input the length of a side of the hexagon: ");  s = input.nextInt();  System.out.println("The area of the hexagon is: " + 6 \* Math.pow(s, 2)/(4\*Math.tan(Math.PI/6)));  }  } |

Output:

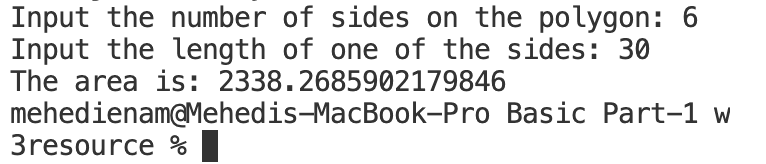


# **35.** Write a Java program to compute the area of a polygon.  Area of a polygon = (n\*s^2)/(4\*tan(π/n)) where n is n-sided polygon and s is the length of a side

Code:

|  |
| --- |
| import java.util.Scanner;  public class thirtyfive {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int n, leength;  System.out.print("Input the number of sides on the polygon: ");  n = input.nextInt();  System.out.print("Input the length of one of the sides: ");  leength = input.nextInt();  System.out.println("The area is: " + (n\*Math.pow(leength, 2))/(4\*Math.tan(Math.PI/n)));  }  } |

Output:



36. Write a Java program to compute the distance between two points on the earth's surface.   
Distance between the two points [ (x1,y1) & (x2,y2)]  
d = radius \* arccos(sin(x1) \* sin(x2) + cos(x1) \* cos(x2) \* cos(y1 - y2))  
Radius of the earth r = 6371.01 Kilometers

Code:

|  |
| --- |
|  |

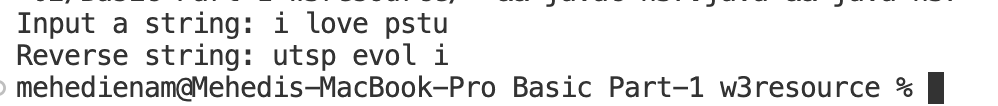
Output:

# **37.** Write a Java program to reverse a string.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n37 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  String x;  System.out.print("Input a string: ");  x = input.nextLine();  StringBuilder rx = new StringBuilder(x);  System.out.println("Reverse string: " + rx.reverse());  input.close();  }  } |

Output:

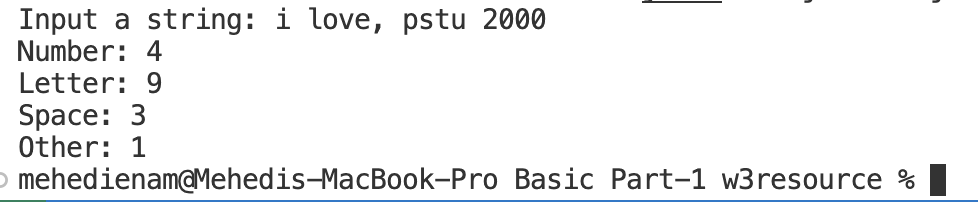


# **38.** Write a Java program to count letters, spaces, numbers and other characters in an input string.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n38 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int nc = 0, lc = 0, sc = 0, oc = 0, flag = 0;  String x, number = "1234567890", letter = "abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ";  System.out.print("Input a string: ");  x = input.nextLine();  for (int i = 0; i < x.length(); i++) {  flag = 0;  for (int j = 0; j < number.length(); j++) {  if (number.charAt(j) == x.charAt(i)) {  nc++;  flag = 1;  break;  }  }  for (int j = 0; j < letter.length(); j++) {  if (letter.charAt(j) == x.charAt(i)) {  lc++;  flag = 1;  break;  }  }  if (x.charAt(i) == ' ') {  sc++;  flag = 1;  }  else if (flag == 0) {  oc++;  }  }  System.out.println("Number: " + nc);  System.out.println("Letter: " + lc);  System.out.println("Space: " + sc);  System.out.println("Other: " + oc);  input.close();  }  } |

Output:

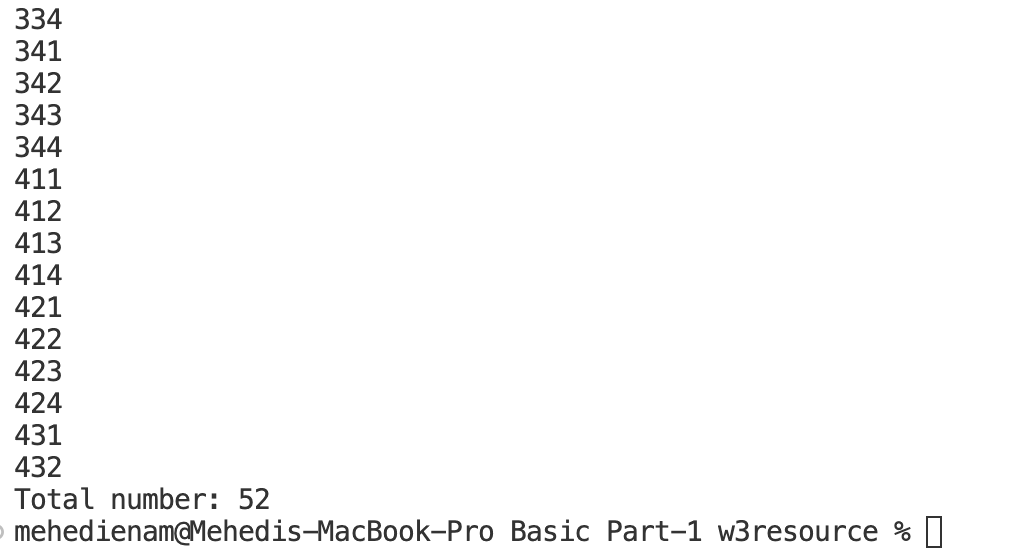


# **39.** Write a Java program to create and display a unique three-digit number using 1, 2, 3, 4. Also count how many three-digit numbers are there.

Code:

|  |
| --- |
| import java.util.Scanner;;  public class n39 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int count = 0;  String temp;  for (int i = 123; i <= 432; i++) {  temp = Integer.toString(i);  if ((temp.charAt(0) == '1' || temp.charAt(0) == '2' || temp.charAt(0) == '3' || temp.charAt(0) == '4') && (temp.charAt(1) == '1' || temp.charAt(1) == '2' || temp.charAt(1) == '3' || temp.charAt(1) == '4') && (temp.charAt(2) == '1' || temp.charAt(2) == '2' || temp.charAt(2) == '3' || temp.charAt(2) == '4')) {  System.out.println(i);  count++;  }  }  System.out.println("Total number: " + count);  input.close();  }  } |

Output:

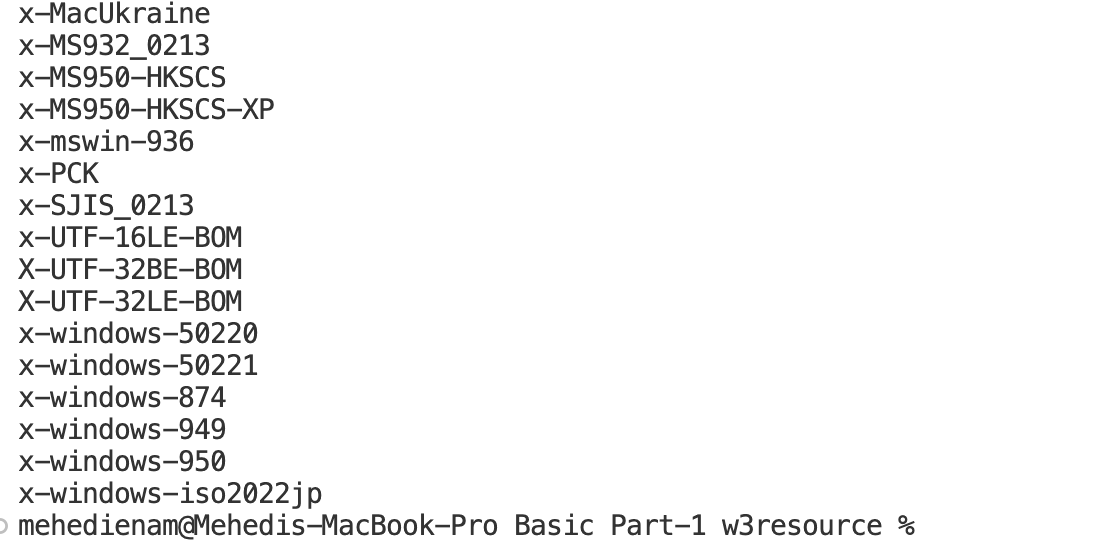


# **40.** Write a Java program to list the available character sets in charset objects.

Code:

|  |
| --- |
| import java.nio.charset.Charset;  import java.util.Map;  public class n40 {  public static void main(String[] args) {  Map<String, Charset> charsets = Charset.availableCharsets();  System.out.println("List of available character sets:");  for (String charsetName : charsets.keySet()) {  System.out.println(charsetName);  }  }  } |

Output:

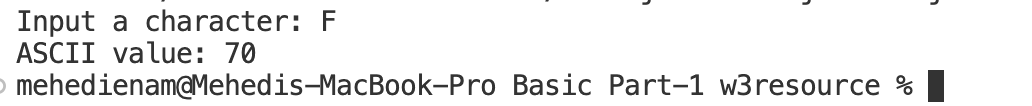


# **41.** Write a Java program to print the ASCII value of a given character.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n41 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  String x;  System.out.print("Input a character: ");  x = input.nextLine();  System.out.println("ASCII value: " + (int)(x.charAt(0)));    input.close();  }  } |

Output:

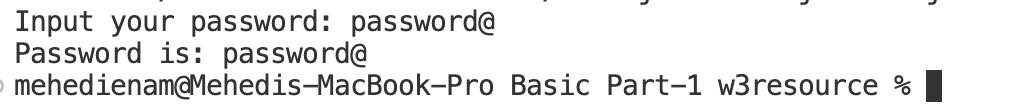


# **42.** Write a Java program to input and display your password.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n42 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  String pass;  System.out.print("Input your password: ");  pass = input.nextLine();  System.out.println("Password is: " + pass);    input.close();  }  } |

Output:



43. Write a Java program to print the following string in a specific format (see output).   
*Sample Output:*

Twinkle, twinkle, little star,

How I wonder what you are!

Up above the world so high,

Like a diamond in the sky.

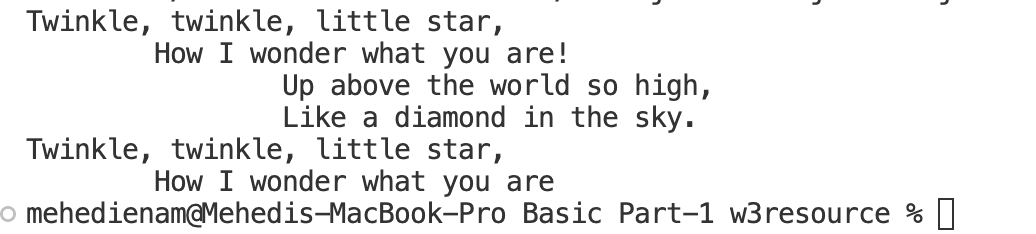
Twinkle, twinkle, little star,

How I wonder what you are

Code:

|  |
| --- |
| public class n43 {  public static void main(String[] args) {  String str = "Twinkle, twinkle, little star,\n" +  "\tHow I wonder what you are! \n" +  "\t\tUp above the world so high, \t\t\n" +  "\t\tLike a diamond in the sky. \n" +  "Twinkle, twinkle, little star, \n" +  "\tHow I wonder what you are";  System.out.println(str);  }  } |

Output:

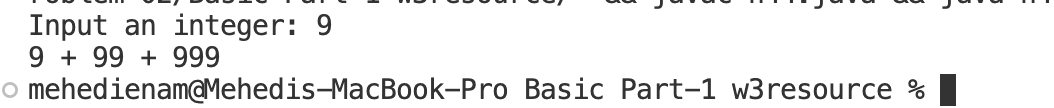


# **44.** Write a Java program that accepts an integer (n) and computes the value of n+nn+nnn.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n44 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int n;  System.out.print("Input an integer: ");  n = input.nextInt();  System.out.println(n + " + " + (n\*10+n) + " + " + (n\*100+n\*10+n));    input.close();  }  } |

Output:



# **45.** Write a Java program to find the size of a specified file.

Code:

|  |
| --- |
|  |

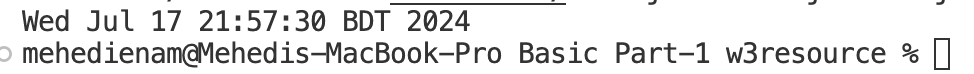
Output:

# **46.** Write a Java program to display system time.

Code:

|  |
| --- |
| import java.util.Date;  public class n46 {  public static void main(String[] args) {  long time = System.currentTimeMillis();  Date date = new Date(time);  System.out.println(date);  }  } |

Output:

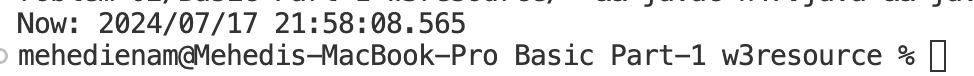


# **47.** Write a Java program to display the current date and time in a specific format.

Code:

|  |
| --- |
| import java.text.SimpleDateFormat;  import java.util.Date;  public class n47 {  public static void main(String[] args) {  String Pattern = "yyyy/MM/dd HH:mm:ss.SSS";  SimpleDateFormat formatter = new SimpleDateFormat(Pattern);  Date now = new Date();  System.out.println("Now: " + formatter.format(now));  }  } |

Output:

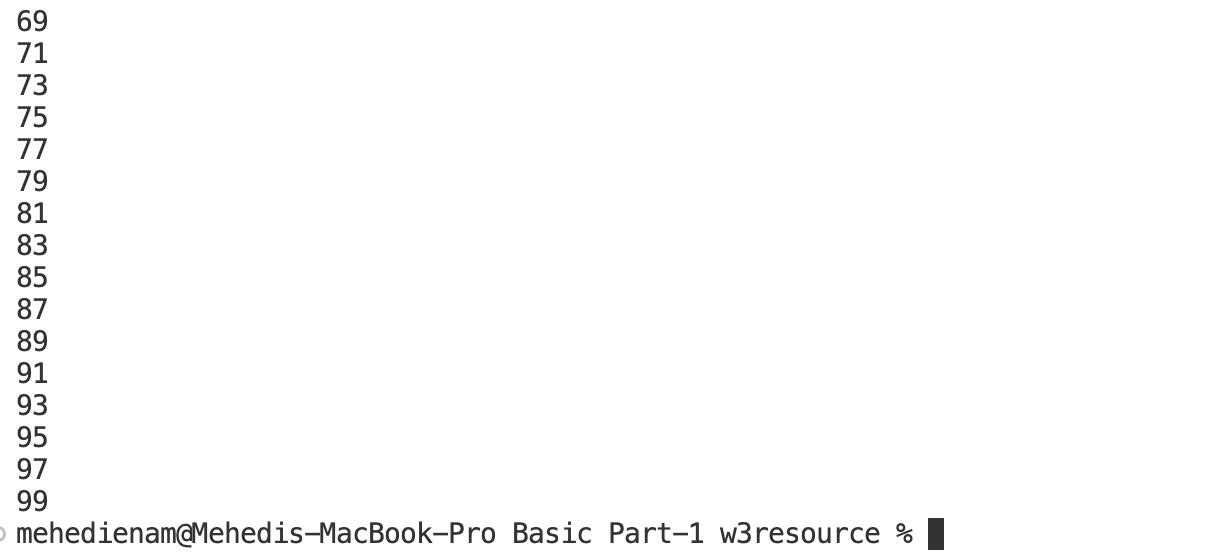


# **48.** Write a Java program to print odd numbers from 1 to 99. Prints one number per line.

Code:

|  |
| --- |
| import java.text.SimpleDateFormat;  import java.util.Date;  public class n47 {  public static void main(String[] args) {  String Pattern = "yyyy/MM/dd HH:mm:ss.SSS";  SimpleDateFormat formatter = new SimpleDateFormat(Pattern);  Date now = new Date();  System.out.println("Now: " + formatter.format(now));  }  } |

Output:

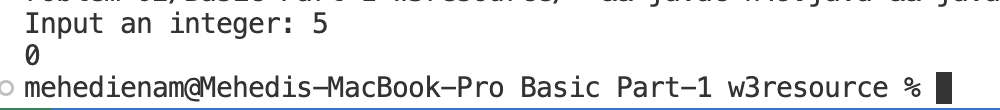


# **49.** Write a Java program to accept a number and check whether the number is even or not. Prints 1 if the number is even or 0 if odd.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n49 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int n;  System.out.print("Input an integer: ");  n = input.nextInt();  System.out.println(n % 2 != 0? 0 : 1);  input.close();  }  } |

Output:

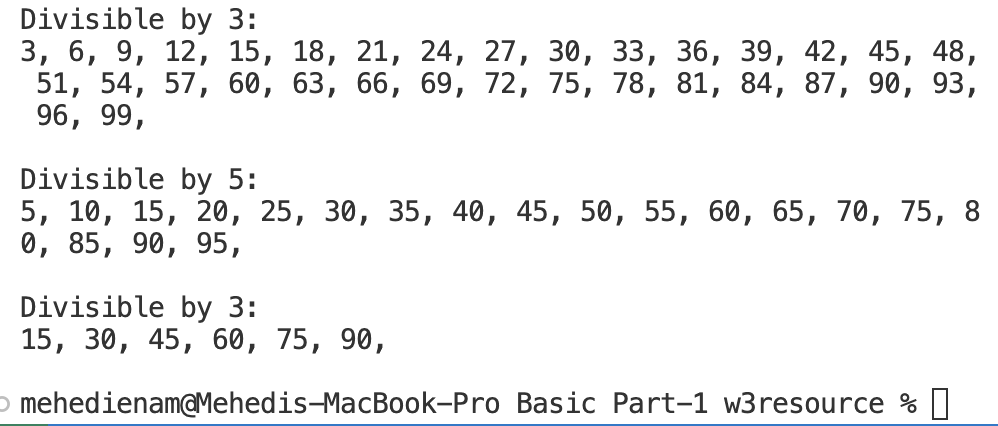


# **50.** Write a Java program to print numbers between 1 and 100 divisible by 3, 5 and both.

Code:

|  |
| --- |
| public class n50 {  public static void main(String[] args) {  System.out.println("Divisible by 3:");  for (int i = 3; i < 100; i++) {  if (i % 3 == 0) {  System.out.print(i + ", ");  }  }  System.out.println("\n\nDivisible by 5:");  for (int i = 3; i < 100; i++) {  if (i % 5 == 0) {  System.out.print(i + ", ");  }  }  System.out.println("\n\nDivisible by 3:");  for (int i = 3; i < 100; i++) {  if (i % 3 == 0 && i % 5 == 0) {  System.out.print(i + ", ");  }  }  System.out.println("\n");  }  } |

Output:

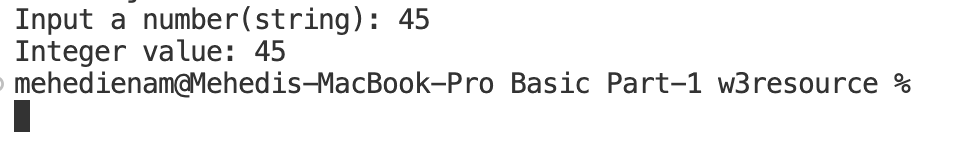


# **51.** Write a Java program to convert a string to an integer.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n51 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int n = 0;  String x, number = "0123456789";  System.out.print("Input a number(string): ");  x = input.nextLine();  for (int i = 0; i < x.length(); i++) {  for (int j = 0; j < number.length(); j++) {  if (x.charAt(i) == number.charAt(j)) {    n = n \* 10;  n = n + j;  break;  }  }  }  System.out.println("Integer value: " + n);  input.close();  }  } |

Output:

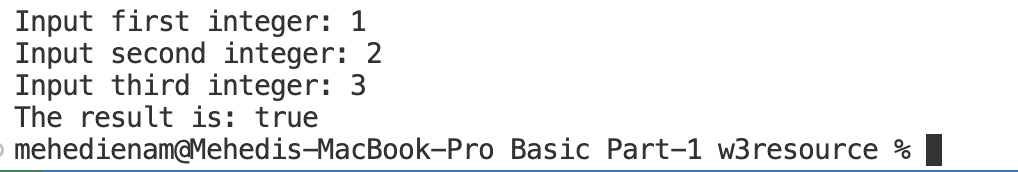


# **52.** Write a Java program to calculate the sum of two integers and return true if the sum is equal to a third integer.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n52 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int a, b, c;  System.out.print("Input first integer: ");  a = input.nextInt();  System.out.print("Input second integer: ");  b = input.nextInt();  System.out.print("Input third integer: ");  c = input.nextInt();    System.out.println("The result is: " + (a+b == c));  input.close();  }  } |

Output:

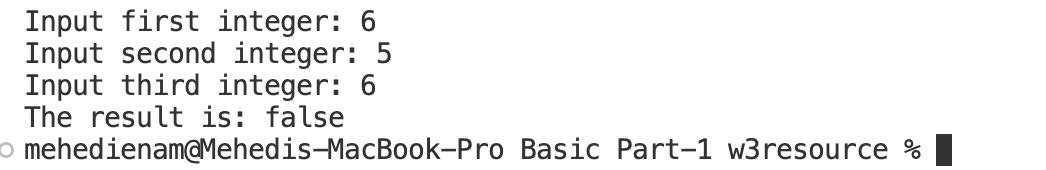


# **53.** Write a Java program that accepts three integers from the user. It returns true if the second number is higher than the first number and the third number is larger than the second number. If "abc" is true, the second number does not need to be larger than the first number.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n53 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int a, b, c;  System.out.print("Input first integer: ");  a = input.nextInt();  System.out.print("Input second integer: ");  b = input.nextInt();  System.out.print("Input third integer: ");  c = input.nextInt();    System.out.println("The result is: " + (b > a && c > b ));  input.close();  }  } |

Output:



**54.** Write a Java program that accepts three integers from the user and returns true if two or more of them (integers) have the same rightmost digit. The integers are non-negative.

Code:

|  |
| --- |
|  |

Output:

Code:

|  |
| --- |
|  |

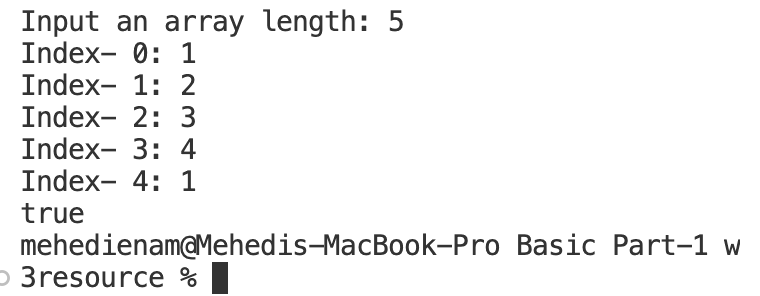
Output:

# **75.** Write a Java program to test if the first and last elements of an array of integers are the same. The array length must be broader than or equal to 2.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n75 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int n;  System.out.print("Input an array length: ");  n = input.nextInt();  if (n >= 2) {  int arr[] = new int[n];  for (int i = 0; i < n; i++) {  System.out.printf("Index- %d: ", i);  arr[i] = input.nextInt();  }  System.out.println(arr[0] == arr[n-1]);  }  else {  System.out.println("Wrong array length. Array length must be greater than 1.");  }  input.close();  }  } |

Output:

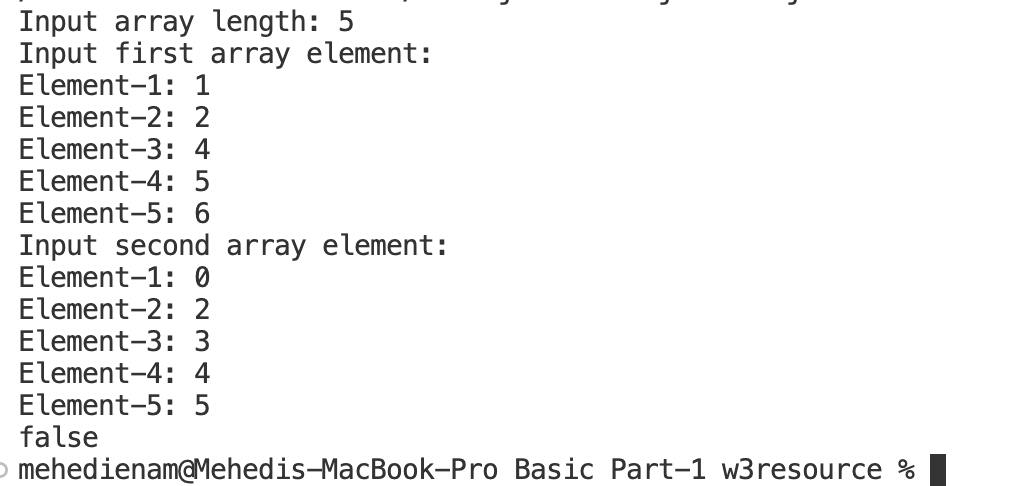


# 76. Write a Java program to test if the first and last element of two integer arrays are the same. The array length must be greater than or equal to 2.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n76 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int n;  System.out.print("Input array length: ");  n = input.nextInt();  if (n >= 2) {  int arr1[] = new int[n], arr2[] = new int[n];  System.out.println("Input first array element:");  for (int i = 0; i < n; i++) {  System.out.printf("Element-%d: ", i+1);  arr1[i] = input.nextInt();  }  System.out.println("Input second array element:");  for (int i = 0; i < n; i++) {  System.out.printf("Element-%d: ", i+1);  arr2[i] = input.nextInt();  }  System.out.println(arr1[0] == arr1[n-1] && arr2[0] == arr2[n-1]);  }  else {  System.out.println("Wrong array length. Array length must be greater than 1.");  }  input.close();  }  } |

Output:

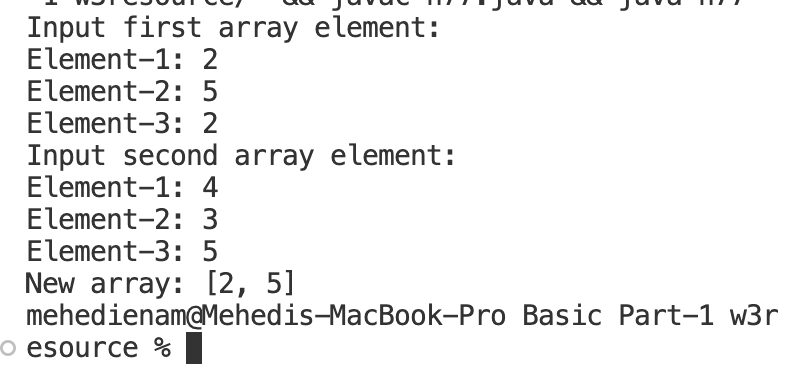


# **77.** Write a Java program to create an array of length 2 from two integer arrays with three elements. The newly created array will contain the first and last elements from the two arrays.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n77 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int arr1[] = new int[3], arr2[] = new int[3];  System.out.println("Input first array element:");  for (int i = 0; i < 3; i++) {  System.out.printf("Element-%d: ", i+1);  arr1[i] = input.nextInt();  }  System.out.println("Input second array element:");  for (int i = 0; i < 3; i++) {  System.out.printf("Element-%d: ", i+1);  arr2[i] = input.nextInt();  }  System.out.printf("New array: [%d, %d]\n", arr1[0],arr2[2]);  input.close();  }  } |

Output:

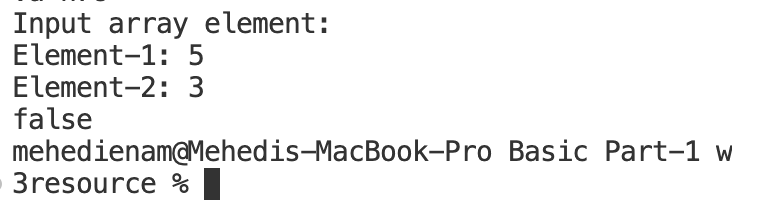


# **78.** Write a Java program to test that a given array of integers of length 2 contains a 4 or a 7.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n78 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int arr[] = new int[2];  System.out.println("Input array element:");  for (int i = 0; i < 2; i++) {  System.out.printf("Element-%d: ", i+1);  arr[i] = input.nextInt();  }  System.out.println(arr[0] == 4 || arr[1] == 7 || arr[0] == 7 || arr[1] == 4);  input.close();  }  } |

Output:

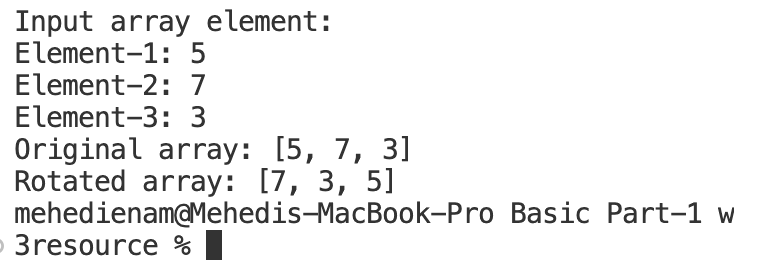


# **79.** Write a Java program to rotate an array (length 3) of integers in the left direction.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n79 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int temp;  int arr[] = new int[3];  System.out.println("Input array element:");  for (int i = 0; i < 3; i++) {  System.out.printf("Element-%d: ", i+1);  arr[i] = input.nextInt();  }  System.out.printf("Original array: [%d, %d, %d]\n", arr[0], arr[1], arr[2]);  for (int i = 0; i < 2; i++) {  temp = arr[i];  arr[i] = arr[i+1];  arr[i+1] = temp;  }  System.out.printf("Rotated array: [%d, %d, %d]\n", arr[0], arr[1], arr[2]);  input.close();  }  } |

Output:

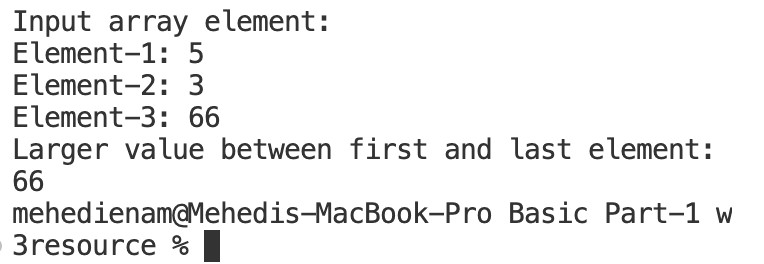


# **80.** Write a Java program to get the largest value between the first and last elements of an array (length 3) of integers.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n80 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int arr[] = new int[3];  System.out.println("Input array element:");  for (int i = 0; i < 3; i++) {  System.out.printf("Element-%d: ", i+1);  arr[i] = input.nextInt();  }  if (arr[0] > arr[2]) {  System.out.println("Larger value between first and last element: " + arr[0]);  }  else if (arr[0] < arr[2]) {  System.out.println("Larger value between first and last element: " + arr[2]);  }  input.close();  }  } |

Output:

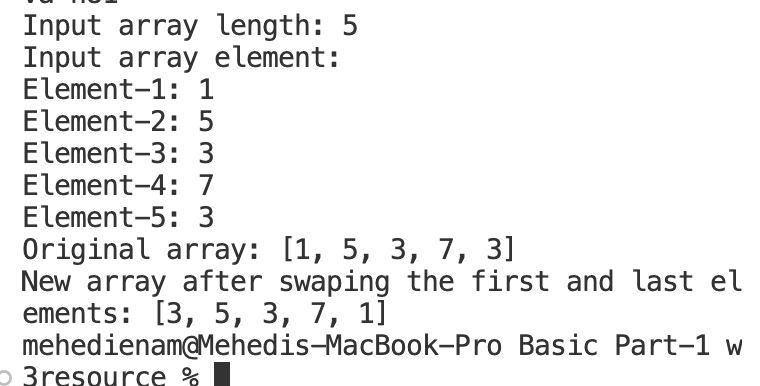


# **81.** Write a Java program to swap the first and last elements of an array (length must be at least 1) and create another array.

Code:

|  |
| --- |
| import java.util.Arrays;  import java.util.Scanner;  public class n81 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int n, temp;  System.out.print("Input array length: ");  n = input.nextInt();  if (n >= 1) {  int arr[] = new int[n];  System.out.println("Input array element:");  for (int i = 0; i < n; i++) {  System.out.printf("Element-%d: ", i+1);  arr[i] = input.nextInt();  }  System.out.println("Original array: " + Arrays.toString(arr));  temp = arr[0];  arr[0] = arr[n-1];  arr[n-1] = temp;  System.out.println("New array after swaping the first and last elements: " + Arrays.toString(arr));  }  else {  System.out.println("Wrong array length. Array length must be greater than 0.");  }  input.close();  }  } |

Output:

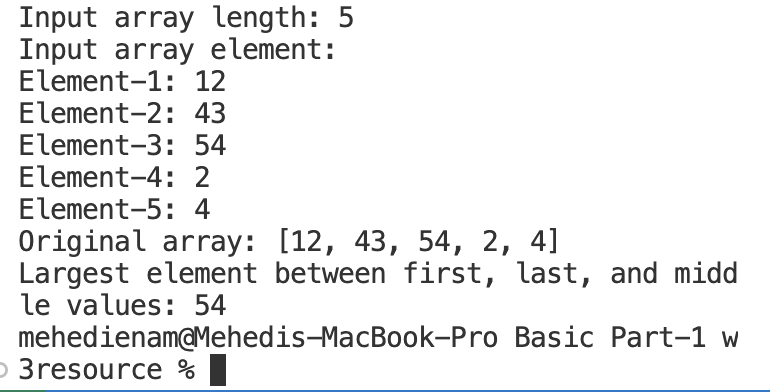


# **82.** Write a Java program to find the largest element between the first, last, and middle values in an array of integers (even length).

Code:

|  |
| --- |
| import java.util.Arrays;  import java.util.Scanner;  public class n82 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int n;  System.out.print("Input array length: ");  n = input.nextInt();  if (n % 2 != 0) {  int arr[] = new int[n];  System.out.println("Input array element:");  for (int i = 0; i < n; i++) {  System.out.printf("Element-%d: ", i+1);  arr[i] = input.nextInt();  }  System.out.println("Original array: " + Arrays.toString(arr));  if (arr[0] > arr[n-1] && arr[0] > arr[n/2]) {  System.out.println("Largest element between first, last, and middle values: " + arr[0]);  }  else if (arr[0] < arr[n-1] && arr[n-1] > arr[n/2]) {  System.out.println("Largest element between first, last, and middle values: " + arr[n-1]);  }  else {  System.out.println("Largest element between first, last, and middle values: " + arr[n/2]);  }  }  else {  System.out.println("Wrong array length. Array length must be odd.");  }  input.close();  }  } |

Output:

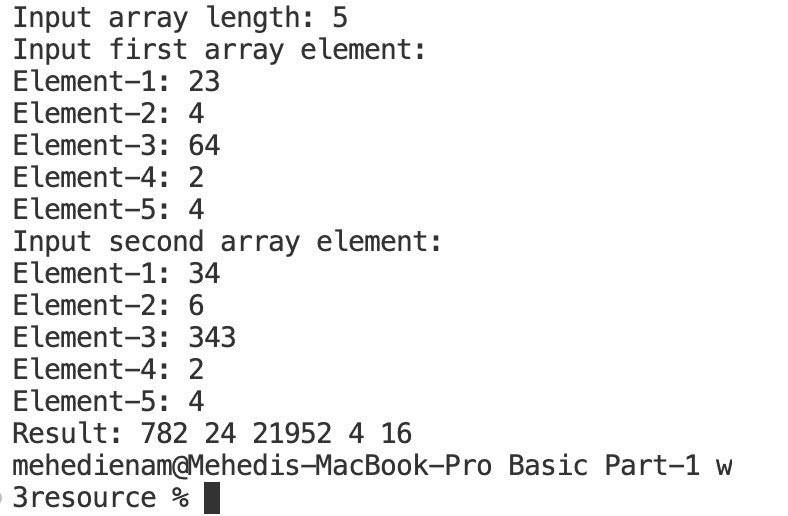


# **83.** Write a Java program to multiply the corresponding elements of two integer arrays.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n83 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int n;  System.out.print("Input array length: ");  n = input.nextInt();  int arr1[] = new int[n], arr2[] = new int[n];  System.out.println("Input first array element:");  for (int i = 0; i < n; i++) {  System.out.printf("Element-%d: ", i+1);  arr1[i] = input.nextInt();  }  System.out.println("Input second array element:");  for (int i = 0; i < n; i++) {  System.out.printf("Element-%d: ", i+1);  arr2[i] = input.nextInt();  }  System.out.print("Result: ");  for (int i = 0; i < arr2.length; i++) {  System.out.print(arr1[i]\*arr2[i] + " ");  }  System.out.println("");  input.close();  }  } |

Output:

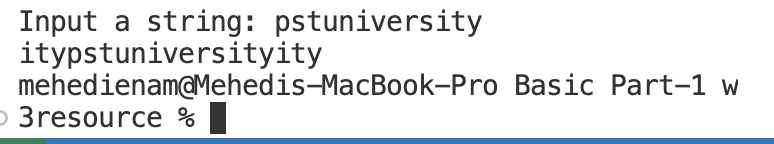


# **84.** Write a Java program to take the last three characters from a given string. It will add the three characters at both the front and back of the string. String length must be greater than three and more.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n84 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  String x;  System.out.print("Input a string: ");  x = input.nextLine();  if (x.length() > 3) {  System.out.println(x.substring(x.length()-3, x.length())+x+x.substring(x.length()-3, x.length()));  }  else {  System.out.println("Wrong string length. String length must be greater than three.");  }  input.close();  }  } |

Output:

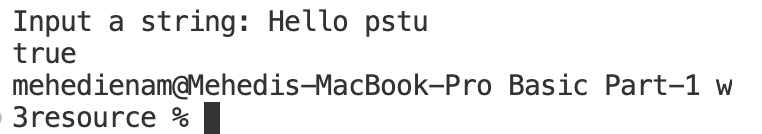


# **85.** Write a Java program to check if a string starts with a specified word.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n85 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  String x;  System.out.print("Input a string: ");  x = input.nextLine();  System.out.println(x.startsWith("Hello"));  input.close();  }  } |

Output:

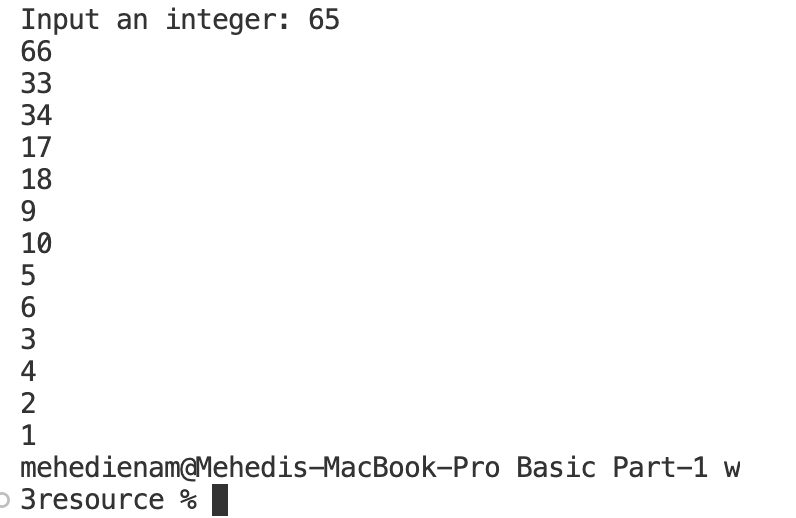


# **86.** Write a Java program starting with an integer n, divide it by 2 if it is even, or multiply it by 3 and add 1 if it is odd. Repeat the process until n = 1.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n86 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int n;  System.out.print("Input an integer: ");  n = input.nextInt();  input.close();  for (int i = n; ; ) {  if (i % 2 == 0) {  i = i/2;  }  else {  i += 1;  }  System.out.println(i);  if (i == 1) {  break;  }  }  }  } |

Output:

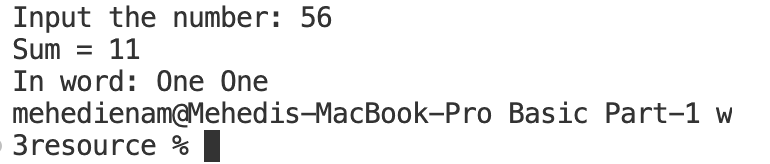


# **87.** Write a Java program that then reads an integer and calculates the sum of its digits and writes the number of each digit of the sum in English.

Code:

|  |
| --- |
| import java.util.Scanner;  public class n87 {  public static void main(String[] args) {  Scanner input = new Scanner(System.in);  int a, sum = 0, temp;  System.out.print("Input the number: ");  a = input.nextInt();  for (int i = a; i > 0; ) {  temp = i % 10;  sum += temp;  i -= temp;  i /= 10;  }  System.out.println("Sum = " + sum);  System.out.print("In word: ");    for (int i = 0; i < Integer.toString(sum).length(); i++) {  switch (Integer.toString(sum).charAt(i)) {  case '0':  System.out.print("Zero ");  break;  case '1':  System.out.print("One ");  break;  case '2':  System.out.print("Two ");  break;  case '3':  System.out.print("Three ");  break;  case '4':  System.out.print("Four ");  break;  case '5':  System.out.print("Five ");  break;  case '6':  System.out.print("Six ");  break;  case '7':  System.out.print("Seven ");  break;  case '8':  System.out.print("Eight ");  break;  case '9':  System.out.print("Nine ");  break;  default:  break;  }  }  System.out.println();  input.close();  }  } |

Output:

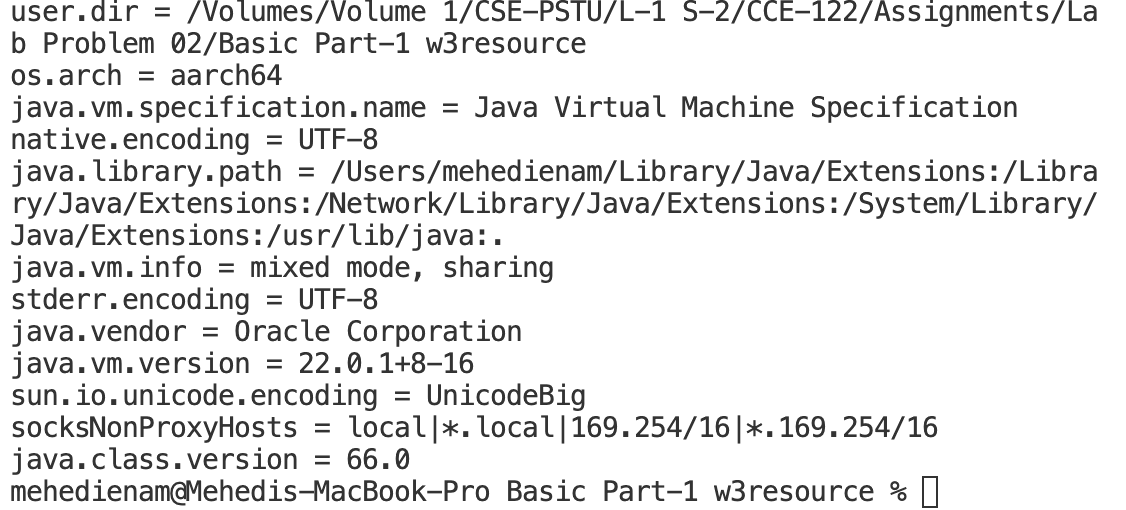


# **88.** Write a Java program to get the current system environment and system properties.

Code:

|  |
| --- |
| import java.util.\*;  public class n88 {  public static void main(String[] args) {  System.out.println("\nCurrent system environment:");  Map<String, String> env = System.getenv();  for (Map.Entry<String, String> entry : env.entrySet()) {  System.out.println(entry.getKey() + " = " + entry.getValue());  }  System.out.println("\n\nCurrent system properties:");  Properties props = System.getProperties();  for (Map.Entry<Object, Object> entry : props.entrySet()) {  System.out.println(entry.getKey() + " = " + entry.getValue());  }  }  } |

Output:

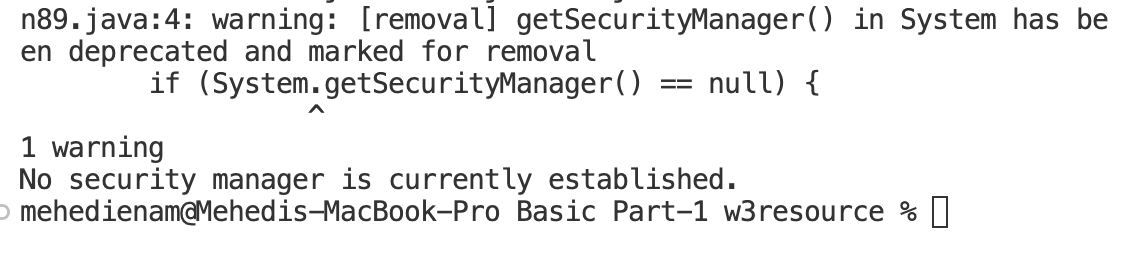


# **89.** Write a Java program to check whether a security manager has already been established for the current application or not.

Code:

|  |
| --- |
| public class n89 {  public static void main(String[] args) {  if (System.getSecurityManager() == null) {  System.out.println("No security manager is currently established.");  } else {  System.out.println("A security manager is already established.");  }  }  } |

Output:

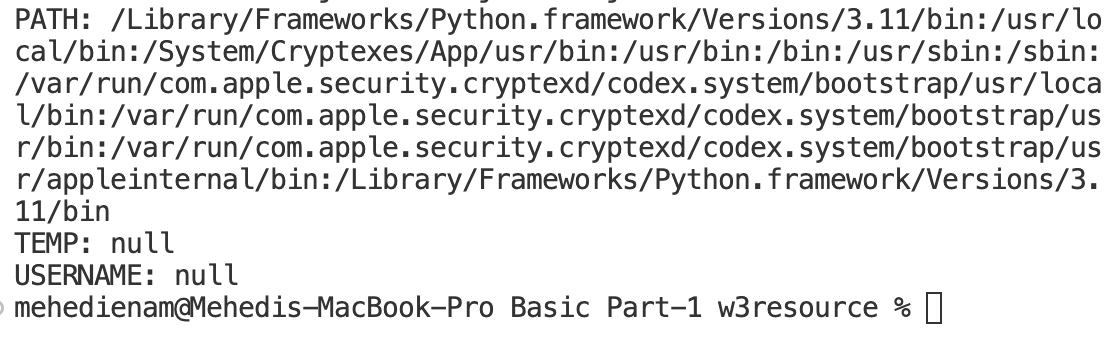


# **90.** Write a Java program to get the value of environment variables PATH, TEMP, USERNAME.

Code:

|  |
| --- |
| import java.util.Map;  public class n90 {  public static void main(String[] args) {  Map<String, String> env = System.getenv();  String path = env.get("PATH");  String temp = env.get("TEMP");  String username = env.get("USERNAME");  System.out.println("PATH: " + path);  System.out.println("TEMP: " + temp);  System.out.println("USERNAME: " + username);  }  } |

Output:



Code:

|  |
| --- |
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Output:

Code:

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|  |

Output:

Code:

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| --- |
|  |

Output:

Code:

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| --- |
|  |

Output: