LAB # 1

1. Write a program that initialize five different strings using all the above mentioned ways, i.e.,

a) string literals

b) new keyword

also use intern method and show string immutability

CODE:

public class DSA\_LAB1 {

public static void main(String[] args) {

String str1 = "Hello";

String str2 = "Hello";

String str3 = new String("Hello");

String str4 = str3.intern();

String modifiedStr = str1.concat(" World");

System.out.println("str1 == str2: " + (str1 == str2));

System.out.println("str1 == str3: " + (str1 == str3));

System.out.println("str1 == str4: " + (str1 == str4));

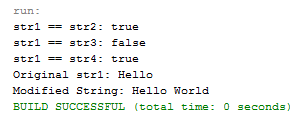
System.out.println("Original str1: " + str1);

System.out.println("Modified String: " + modifiedStr);

}

}

OUTPUT:



2. Write a program to convert primitive data type Double into its respective wrapper object.

CODE:

public class DSA\_LAB1 {

public static void main(String[] args) {

double primitiveDouble = 10.5;

Double wrapperDouble = primitiveDouble;

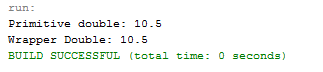
System.out.println("Primitive double: " + primitiveDouble);

System.out.println("Wrapper Double: " + wrapperDouble);

}

}

OUTPUT:



3. Write a program that initialize five different strings and perform the following operations.

a. Concatenate all five stings.

b. Convert fourth string to uppercase.

c. Find the substring from the concatenated string from 8 to onward

CODE:

public class DSA\_LAB1 {

public static void main(String[] args) {

String str1 = "Java";

String str2 = " is";

String str3 = " a";

String str4 = " programming";

String str5 = " language.";

String concatenatedString = str1 + str2 + str3 + str4 + str5;

System.out.println("Concatenated String: " + concatenatedString);

String uppercaseStr4 = str4.toUpperCase();

System.out.println("Fourth string in uppercase: " + uppercaseStr4);

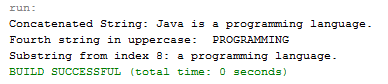
String substringFrom8 = concatenatedString.substring(8);

System.out.println("Substring from index 8: " + substringFrom8);

}

}

OUTPUT:



4.You are given two strings word1 and word2. Merge the strings by adding letters in alternating order, starting with word1. If a string is longer than the other, append the additional letters onto the end of the merged string. Return *the merged string.*

CODE:

public class DSA\_LAB1 {

public static String mergeAlternately(String word1, String word2) {

String result = "";

int len1 = word1.length();

int len2 = word2.length();

int maxLength = Math.max(len1, len2);

for (int i = 0; i < maxLength; i++) {

if (i < len1) {

result += word1.charAt(i);

}

if (i < len2) {

result += word2.charAt(i);

}

}

return result;

}

public static void main(String[] args) {

String word1 = "abc";

String word2 = "pqr";

String mergedString = mergeAlternately(word1, word2);

System.out.println("Merged String: " + mergedString);

}

}

OUTPUT:



5. Write a Java program to find the minimum and maximum values of Integer**,** Float**,** and Double using the respective wrapper class constants.

CODE:

public class DSA\_LAB1 {

public static void main(String[] args) {

int minInt = Integer.MIN\_VALUE;

int maxInt= Integer.MAX\_VALUE;

float minFloat = Float.MIN\_VALUE;

float maxFloat = Float.MAX\_VALUE;

double minDouble = Double.MIN\_VALUE;

double maxDouble = Double.MAX\_VALUE;

System.out.println("Integer Minimum: " + minInt);

System.out.println("Integer Maximum: " + maxInt);

System.out.println("Float Minimum: " + minFloat);

System.out.println("Float Maximum: " + maxFloat);

System.out.println("Double Minimum: " + minDouble);

System.out.println("Double Maximum: " + maxDouble);

}

}

OUTPUT:

