**Week 7**

**Program 1:** WAP to find whether a given string is palindrome or not

import java.util.Scanner;

public class Palindrome {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter a string: ");

String str = input.nextLine();

if(isPalindrome(str))

System.out.println(str + " is a palindrome");

else

System.out.println(str + " is not a palindrome");

}

public static boolean isPalindrome(String str) {

int left = 0;

int right = str.length() - 1;

while(left < right) {

if(str.charAt(left) != str.charAt(right))

return false;

left++;

right--;

}

return true;

}

}

**Program 2:** Write a method that will remove given character from the String.

Class hello{

Public static void main(String args[]){

String str = "hello world";

char ch = 'l';

String result = removeCharFromString(str, ch);

System.out.println(result);

}

}

**Program 3:** Write a java program for sorting a given list of names.

import java.util.ArrayList;

import java.util.Collections;

import java.util.List;

import java.util.Scanner;

public class SortNames {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter the number of names: ");

int n = input.nextInt();

input.nextLine(); // consume the leftover newline character

List<String> names = new ArrayList<>();

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

System.out.print("Enter name #" + (i + 1) + ": ");

String name = input.nextLine();

names.add(name);

}

Collections.sort(names);

System.out.println("Sorted list of names:");

for (String name : names) {

System.out.println(name);

}

}

}

**Program 4:** Write a program that computes your initials from your full name and displays them.

import java.util.Scanner;

public class Initials {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter your full name: ");

String fullName = input.nextLine();

String[] names = fullName.split(" ");

StringBuilder initials = new StringBuilder();

for (String name : names) {

initials.append(name.charAt(0));

}

System.out.println("Your initials are: " + initials);

}

}

**Program 5:** An anagram is a word or a phrase made by transposing the letters of another word or phrase; for example, "parliament" is an anagram of "partial men," and "software" is an anagram of "swear oft." Write a program that figures out whether one string is an anagram of another string. The program should ignore white space and punctuation

import java.util.Arrays;

import java.util.Scanner;

public class Anagram {

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter the first string: ");

String str1 = input.nextLine().toLowerCase().replaceAll("[^a-z0-9]", "");

System.out.print("Enter the second string: ");

String str2 = input.nextLine().toLowerCase().replaceAll("[^a-z0-9]", "");

char[] charArray1 = str1.toCharArray();

char[] charArray2 = str2.toCharArray();

Arrays.sort(charArray1);

Arrays.sort(charArray2);

if (Arrays.equals(charArray1, charArray2)) {

System.out.println("The strings are anagrams.");

} else {

System.out.println("The strings are not anagrams.");

}

}

}