Q1

import java.util.Scanner;

public class StringBuilderExample {

public static void main(String[] args) {

Scanner sc=new Scanner(System.in);

System.out.print("enter String:");

String st =sc.next();

StringBuilder sb = new StringBuilder(st);

sb.append(" Programming");

System.out.println("After append: " + sb);

sb.insert(5, "Language ");

System.out.println("After insert: " + sb);

sb.replace(5, 13, "Code");

System.out.println("After replace: " + sb);

sb.delete(5, 10);

System.out.println("After delete: " + sb);

sb.reverse();

System.out.println("After reverse: " + sb);

}

}

Q2

import java.util.Scanner;

public class CharExample {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

char ch = sc.next().charAt(0); // get first character from input

System.out.println("You entered: " + ch);

System.out.println("Unicode value: " + (int)ch);

// Check if alphabet, digit, or special character

if(Character.isLetter(ch))

System.out.println("It is a letter.");

else if(Character.isDigit(ch))

System.out.println("It is a digit.");

else

System.out.println("It is a special character.");

sc.close();

}

}

Q3

import java.util.Scanner;

public class CharIfExample {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

char ch = sc.next().charAt(0); // take first character of input

// Convert to lowercase for easy checking

char lower = Character.toLowerCase(ch);

if(lower == 'a' || lower == 'e' || lower == 'i' || lower == 'o' || lower == 'u') {

System.out.println(ch + " is a vowel.");

} else if(Character.isLetter(ch)) {

System.out.println(ch + " is a consonant.");

} else {

System.out.println(ch + " is not a letter.");

}

sc.close();

}

}

Q4

import java.util.Scanner;

public class StringConcatExample {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

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

String s1 = sc.nextLine();

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

String s2 = sc.nextLine();

// Using +

System.out.println("Concatenated (+): " + (s1 + " " + s2));

// Using concat()

System.out.println("Concatenated (concat): " + s1.concat(" ").concat(s2));

// Using StringBuilder

StringBuilder sb = new StringBuilder(s1);

sb.append(" ").append(s2);

System.out.println("Concatenated (StringBuilder): " + sb);

sc.close();

}

}

Q5

import java.util.Scanner;

public class ArrayUserInput {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

// Step 1: Get size of array

System.out.print("Enter size of array: ");

int n = sc.nextInt();

int[] arr = new int[n]; // create array

// Step 2: Get elements from user

System.out.println("Enter " + n + " numbers:");

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

arr[i] = sc.nextInt();

}

// Step 3: Print array elements

System.out.println("You entered:");

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

System.out.println("Element at index " + i + " = " + arr[i]);

}

sc.close();

}

}