LAB\_5

CT/2021/001 Nirmal B.A.C.C

**Q\_01**

package Q\_01;  
  
public class Q\_1 {  
 public static void main(String[] args) {  
 int i = 10;  
 while (i <= 49) {  
 int j = 0;  
 while (j < 10 && i <= 49) {  
 System.*out*.print(i + " ");  
 i++;  
 j++;  
 }  
 System.*out*.println();  
 }  
}  
}

Output:

A screenshot of a computer program

AI-generated content may be incorrect.

**Q\_02**

package Q\_02;  
  
import java.util.Scanner;  
  
public class Q\_2 {  
 public static void main(String[] args) {  
 Scanner sc = new Scanner(System.*in*);  
 int number;  
  
 do {  
 System.*out*.print("Enter a number: ");  
 number = sc.nextInt();  
 if (number >= 0) {  
 System.*out*.println("Digits: " + *countDigits*(Math.*abs*(number)));  
 }  
 } while (number >= 0);  
 }  
  
 public static int countDigits(int num) {  
 if (num < 10) return 1;  
 return 1 + *countDigits*(num / 10); // Recursive method  
 }  
}

Output:

A screenshot of a computer program

AI-generated content may be incorrect.

**Q\_03**

package Q\_03;  
  
import java.util.Scanner;  
  
public class Q\_3 {  
  
 public static void main(String[] args) {  
 Scanner sc = new Scanner(System.*in*);  
 System.*out*.print("Enter a number: ");  
 int n = sc.nextInt();  
  
 int i = 1;  
 while (i <= 10) {  
 System.*out*.println(n + " x " + i + " = " + (n \* i));  
 i++;  
 }  
 }  
}

**Output:**

A screen shot of a computer

AI-generated content may be incorrect.

**Q\_04**

package Q\_04;  
  
import java.util.Scanner;  
  
public class Q\_4 {  
  
 public static void main(String[] args) {  
 Scanner sc = new Scanner(System.*in*);  
 System.*out*.print("Enter number of rows: ");  
 int rows = sc.nextInt();  
  
 int i = 1;  
 while (i <= rows) {  
 for (int space = 1; space <= rows - i; space++) {  
 System.*out*.print(" ");  
 }  
 for (int star = 1; star <= 2 \* i - 1; star++) {  
 System.*out*.print("\*");  
 }  
 System.*out*.println();  
 i++;  
 }  
 }  
  
  
}

**Output:**

A screen shot of a computer program

AI-generated content may be incorrect.

**Q\_05**

package Q\_05;  
  
import java.util.Scanner;  
  
public class Q\_5 {  
 public static void main(String[] args) {  
 Scanner sc = new Scanner(System.*in*);  
 System.*out*.print("Enter a word or phrase: ");  
 String text = sc.nextLine().replaceAll("\\s+", "").toLowerCase();  
  
 if (*isPalindrome*(text, 0, text.length() - 1)) {  
 System.*out*.println("It is a palindrome.");  
 } else {  
 System.*out*.println("It is not a palindrome.");  
 }  
 }  
  
 public static boolean isPalindrome(String str, int start, int end) {  
 if (start >= end) return true;  
 if (str.charAt(start) != str.charAt(end)) return false;  
 return *isPalindrome*(str, start + 1, end - 1);  
 }  
  
  
  
  
  
  
  
}

**Output:**

A screen shot of a computer program

AI-generated content may be incorrect.

**Q\_06**

package Q\_06;  
  
import java.util.Scanner;  
  
public class Q\_6 {  
 public static void main(String[] args) {  
 Scanner sc = new Scanner(System.*in*);  
 int secret = (int) (Math.*random*() \* 100) + 1;  
 int guess = 0;  
  
 while (guess != secret) {  
 System.*out*.print("Guess the number (1-100): ");  
 guess = sc.nextInt();  
  
 if (guess < secret) {  
 System.*out*.println("Higher!");  
 } else if (guess > secret) {  
 System.*out*.println("Lower!");  
 } else {  
 System.*out*.println("Correct! You guessed it!");  
 }  
 }  
 }  
  
}

**Output:**

A screenshot of a computer program

AI-generated content may be incorrect.

**Q\_07**

package Q\_07;  
  
import java.util.Scanner;  
  
public class Q\_7 {  
  
 public static void main(String[] args) {  
 Scanner sc = new Scanner(System.*in*);  
 System.*out*.print("Enter a sentence: ");  
 String sentence = sc.nextLine();  
  
 System.*out*.print("Word to replace: ");  
 String oldWord = sc.next();  
  
 System.*out*.print("New word: ");  
 String newWord = sc.next();  
  
 String[] words = sentence.split(" ");  
 int i = 0;  
 do {  
 if (words[i].equals(oldWord)) {  
 words[i] = newWord;  
 }  
 i++;  
 } while (i < words.length);  
  
 for (String word : words) {  
 System.*out*.print(word + " ");  
 }  
 }  
  
  
  
  
}

**Output:**

A screen shot of a computer

AI-generated content may be incorrect.