Lab Worksheet 5: Repetition Statements

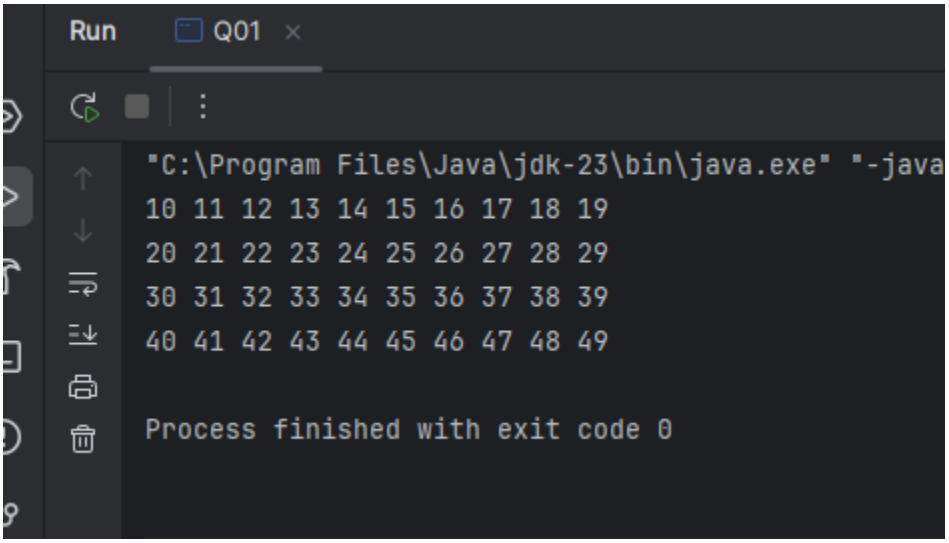
CT/2021/015-Wijewardhana.N.P

01) Code:

```java
package Q1;

public class Q01 {
    public static void main(String[] args) {
      int number=10;
      while (number<=49){
          System.out.print(number+" ");
          if(number%10==9){
              System.out.println();
          }
          number=number+1;
      }
    }
}
```

Output:



02) Code:

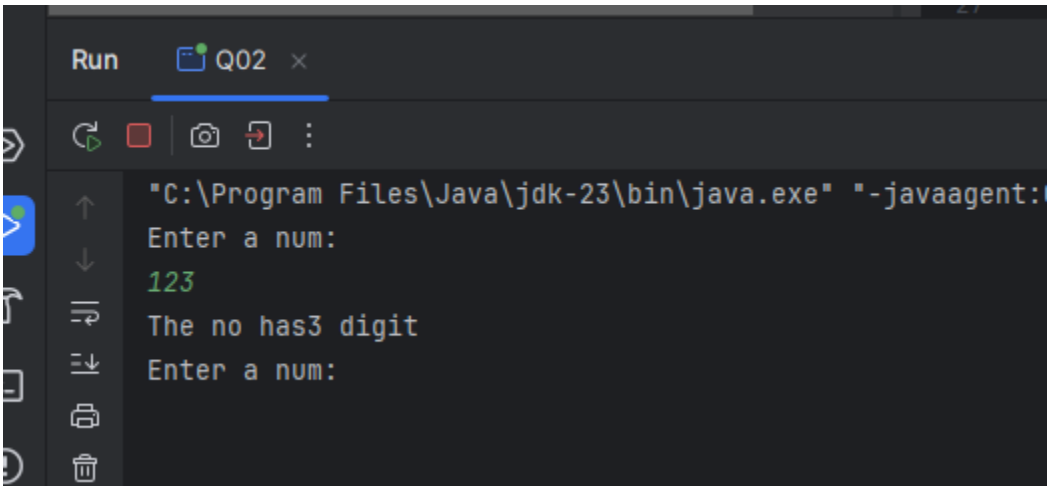
```java
package Q2;
import java.util.Scanner;
public class Q02 {
    public static void main(String[] args) {
        Scanner scanner=new Scanner(System.in);
        int num;
        do{
            System.out.println("Enter a num:");
            num=scanner.nextInt();

            if(num>=0){
                int digit=digitCount(num);
                System.out.println("The no has"+digit+" digit");
            }

        }while (num>=0);

    }
    public static int digitCount(int num){
        int count=0;
        while (num>0){
            num=num/10;
            count ++;
        }
        return count;
    }
}
```

Output:

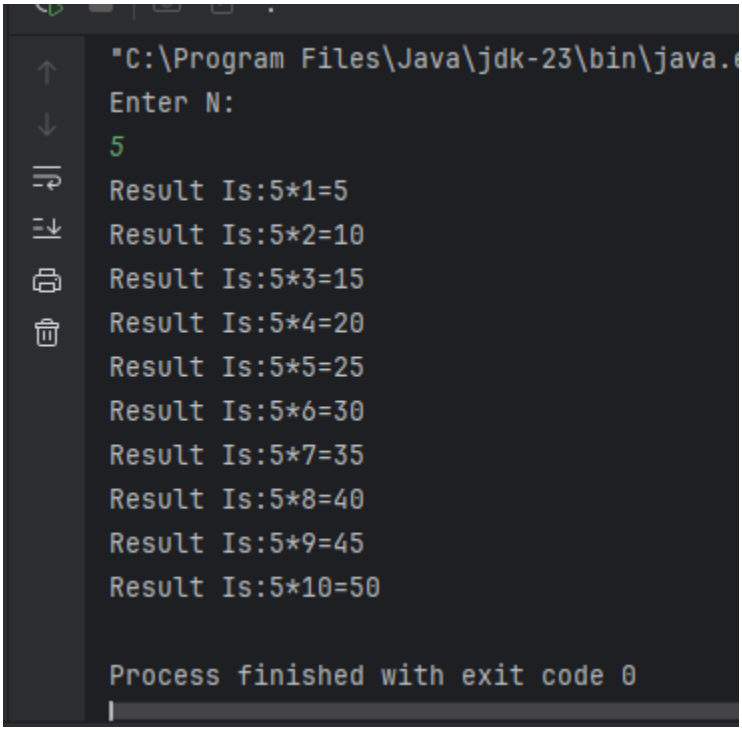


03) Code:

```
package Q3;
import java.util.Scanner;
public class Q03 {
    public static void main(String[] args) {
        Scanner scanner=new Scanner(System.in);
        int N;
        System.out.println("Enter N:");
        N= scanner.nextInt();

        for (int i=1;i<=10;i++){
            int result=N*i;
            System.out.println("Result Is:"+N+"*"+i+"="+result);
        }
    }
}
```

Output:



04)Code:

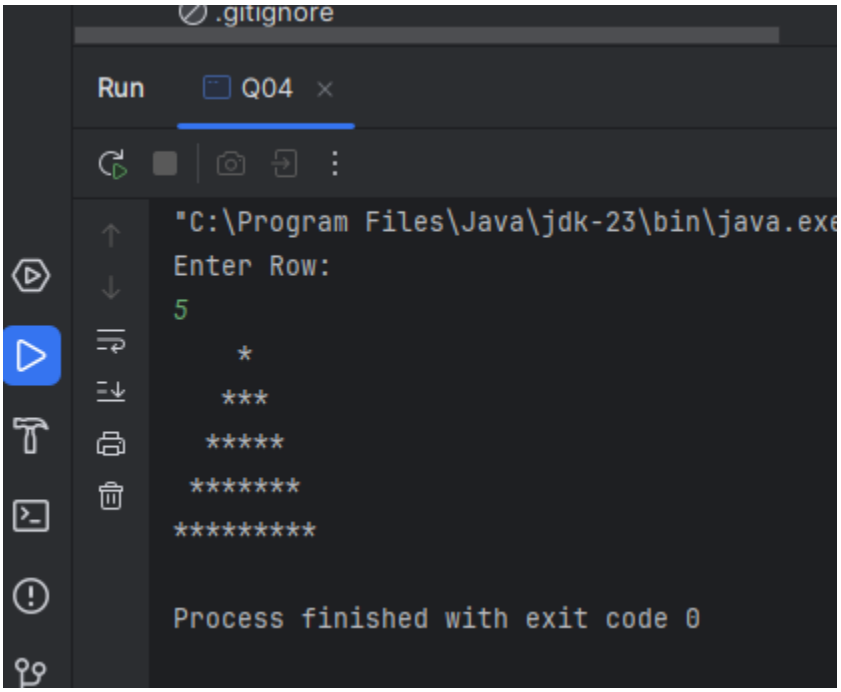
```java
package Q4;
import java.util.Scanner;
public class Q04 {
    public static void main(String[] args) {
        Scanner scanner=new Scanner(System.in);

        System.out.println("Enter Row:");
        int row=scanner.nextInt();
        int space=row-1;
        int asterisks=1;

        for(int i=0;i<row;i++){
            for(int j=0;j<space;j++){
                System.out.print(" ");
            }
            for(int k=0;k<asterisks;k++){
                System.out.print("*");
            }
            System.out.println();
            asterisks +=2;
            space--;
        }
    }

}
```

Output:



05)Code:

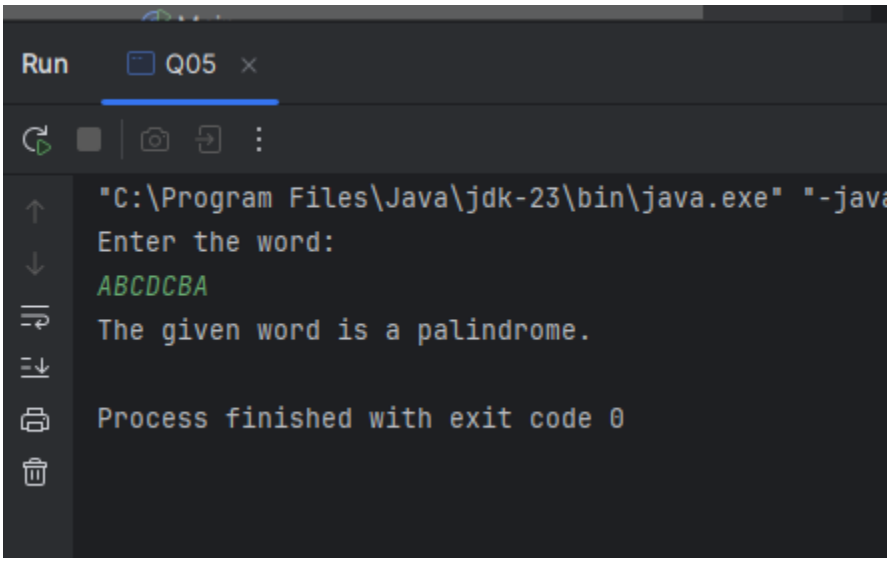
```java
public class Q05 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.println("Enter the word:");
        String word = scanner.nextLine();

        if (isPalindrome(word)) {
            System.out.println("The given word is a palindrome.");
        } else {
            System.out.println("The given word is not a palindrome.");
        }

        scanner.close();
    }

    public static boolean isPalindrome(String word) {
        String reverseWord = "";
        for (int i = word.length() - 1; i >= 0; i--) {
            reverseWord += word.charAt(i);
        }
        return word.equalsIgnoreCase(reverseWord);
    }
}
```

Output:

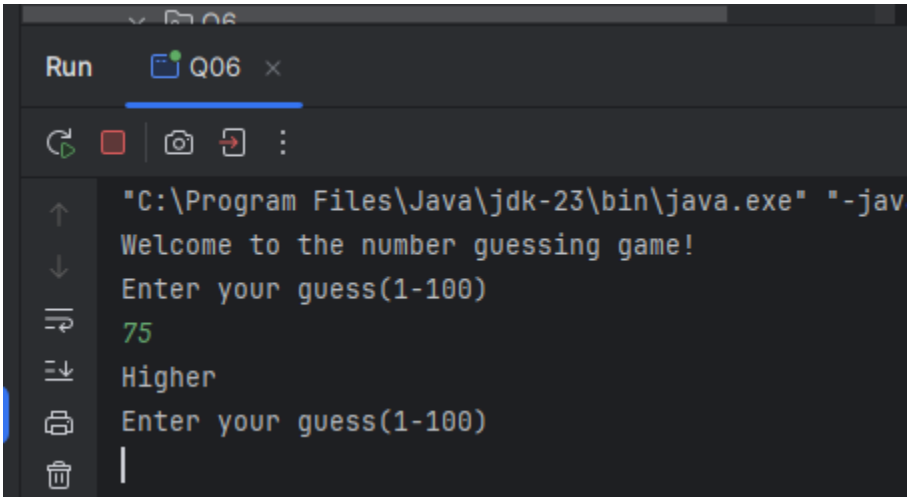


06)Code:

```
package Q6;
import java.util.Scanner;
import java.util.Random;
public class Q06 {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        Random rand = new Random();
        int guess;
        int attempts=0;
        int secretNumber = rand.nextInt(100) + 1;
        System.out.println("Welcome to the number guessing game!");
        do{
            System.out.println("Enter your guess(1-100)");
            guess=input.nextInt();
            attempts++;

            if(guess>secretNumber){
                System.out.println("Higher");
            }
            else if(guess<secretNumber){
                System.out.println("Lower");
            }
            else{
                System.out.println("Congratulations! you guessed the secret
number correctly in"+attempts+"attempts");
            }
        }while (guess!=secretNumber);
    }
}
```

Output:



07)Code:

```
package Q7;
import java.util.Scanner;
public class Q07 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.println("Enter a sentence:");
        String sentence = scanner.nextLine();

        System.out.println("Enter the word to be replaced:");
        String wordToReplace = scanner.nextLine();

        System.out.println("Enter the replacement word:");
        String replacementWord = scanner.nextLine();

        String modifiedSentence = replaceWords(sentence, wordToReplace,
replacementWord);
        System.out.println("Modified sentence: " + modifiedSentence);

        scanner.close();
    }
    public static String replaceWords(String sentence, String wordToReplace,
String replacementWord) {
        String[] words = sentence.split(" ");
        for (int i = 0; i < words.length; i++) {
            // Remove punctuation if needed for cleaner matching
            if (words[i].equalsIgnoreCase(wordToReplace)) {
                words[i] = replacementWord;
            }
        }
        return String.join(" ", words);
    }
}
```