Lab Assignment-04

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QUES 1 [A]: Program to print the corresponding grade for the given mark using if..else statement in Java.

SOLUTION:

import java.util.Scanner;

public class Grade {

    public static *void* main(String[] *args*) {

        Scanner sc = new Scanner(System.in);

        System.out.println("Enter the marks: ");

*int* marks = sc.nextInt();

*char* grade = 'F';

        if (marks >= 90)

            grade = 'O';

        else if (marks >= 80)

            grade = 'E';

        else if (marks >= 70)

            grade = 'A';

        else if (marks >= 60)

            grade = 'B';

        else if (marks >= 50)

            grade = 'C';

        else if (marks >= 40)

            grade = 'D';

        System.out.println("Grade: " + grade);

        sc.close();

    }

}

OUTPUT:

Enter the marks:

80

Grade: *E*

QUES 1 [B]: Program to check a user entered number is palindrome or not.

SOLUTION:

import java.util.Scanner;

class Palindrome {

public static *void* main(String *args*[]) {

        Scanner sc = new Scanner(System.in);

        System.out.println("Enter the number to check:");

*int* num = sc.nextInt();

*int* reversedNum = 0;

*int* remainder;

*int* temp = num;

        while (num != 0) {

            remainder = num % 10;

            reversedNum = reversedNum \* 10 + remainder;

            num /= 10;

        }

        if (temp == reversedNum) {

            System.out.println("Palindrome!");

        } else {

            System.out.println("Not a Palindrome");

        }

        sc.close();

    }

}

OUTPUT:

Enter the number to check:

101

Palindrome!

QUES 2 [A]: Print the following pattern:

A

C D

F G H

J K L M

SOLUTION:

import java.util.Scanner;

class PatternA {

public static *void* main(String *args*[]) {

        Scanner sc = new Scanner(System.in);

        System.out.println("Enter the height of pattern: ");

*int* size = sc.nextInt();

*char* ch = 'A';

        for (*int* i = 1; i <= size; i++) {

            for (*int* j = 1; j <= i; j++) {

                System.out.print(ch + "");

                ch++;

            }

            ch++;

            System.out.println();

        }

        sc.close();

    }

}

OUTPUT:

Enter the height of pattern:

4

A

CD

FGH

JKLM

QUES 2 [B]: Print the following pattern:

1

2 3 2

3 4 5 4 3

4 5 6 7 6 5 4

SOLUTION:

import java.util.\*;

class Pattern1 {

    public static *void* main(String *args*[]) {

        Scanner sc = new Scanner(System.in);

        System.out.println("Enter the size of the pattern:");

*int* size = sc.nextInt();

        for (*int* i = 1; i < size; i++) {

            System.out.print("  ");

        }

        System.out.print("1");

        System.out.println();

        for (*int* i = 2; i <= size; i++) {

            for (*int* j = 1; j <= size - i; j++) {

                System.out.print("  ");

            }

            for (*int* j = i; j <= 2 \* i - 1; j++) {

                System.out.print(j);

                System.out.print(" ");

            }

            for (*int* j = 2 \* i - 2; j >= i; j--) {

                System.out.print(j);

                System.out.print(" ");

            }

            System.out.println();

        }

        sc.close();

    }

}

OUTPUT:

Enter the size of the pattern:

4

      1

    2 3 2

  3 4 5 4 3

4 5 6 7 6 5 4

**-----------------------------------------------------------------------------------------**