22/8/24

CSA0984 - Java Programming

ASSIGNMENT-1

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AI & DS

① Scenario 1: student Grading system.

AIM:

To write a Java program to calculate the student's grades.

Pseudo code:

1. Initialise the score as the variable
2. Then use the if else loop condition to create the logic condition.
3. Then include the grade, score condition.
4. Display the output.

PROGRAM:

```
Import java.util.scanner;
Public class studentGrading system{
    Public static void main (string [] args) {
        Scanner scanner = new Scanner (system.in);
    do {
        system.out.print ("Enter the student's score: ");
        int score = Scanner.nextInt();
        char grade;
        if (score >= 90) {
            grade = 'A';
    } else if (score >= 80) {
            grade = 'B';
```

```
} else if (score >= 70) {
        grade = 'C';
    } else if (score >= 60) {
        grade = 'D';
    }
    System.out.println("Grade: " + grade);
    System.out.print("Do you want to enter score? (yes/no): ");
    continueInput = scanner.next();
} while (continueInput.equalsIgnoreCase("yes"));
scanner.close();
}
}
```

Output:

Enter the student's score: 85

Grade: B

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2. Scenario 2: Number Guessing Game.

Aim:

To write a program to guess the number randomly selects a Num b/w 1 & 10.

Pseudo code:

1. Initialize the variables as random Num.
2. Use the for & if else loop condition to this syntax
3. Then include the guess to check the condition
4. Then Display the Output data.

Code:

```
import Java.util.Random;
import Java.util scanner;
public class Num of crossing crane {
    public static void main (string[] args) {
        Scanner.Scanner = new Scanner (system.in)
        Random Random = new Random ();
        string playAgain;
    do {
        int random Num = random.nextInt (10)+1;
        System.out.print ("Attempt" + i + ":");
        if (guess == randomNum) {
            System.out.println ("correct! you guessed it in " + i + "att");
            guessed correctly = true;
            break;
        }
        else {
            system.out.println ("too high");
        }
    Scanner close;
}
```

Output:

Attempt 1: 5

too low

Attempt 2: 8

too high

Attempt 3: 7

Correct! you guessed in 3 attempt.

3. Multiplication Table

AIM:

To write a program to print multiplication table

Pseudo code:

1. Initialize the variable as x
2. use the for loop condition to print the table
3. use the Range function print
4. Display the multiplication table.

Code:

```
import java.util.scanner;
Public class multiplication table generator {
    Public static void main (string [] args) {
        system.out print ("Enter the Num for mul: ");
        int number = scanner.next Int();
        system.out.print ("Enter the range.(eg.15);");
        int range = scanner.next Int();
        system.out.print tln ("mul table.for" + num + ":");
        for (int i = 1; i <= range ; i++) {
            System.out.print ln( Number + "x" + i + "=" + (num + i);
        }
    Scanner.close()
}
}
```

Output:

5 x 1 = 5
5 x 2 = 10
5 x 3 = 15
5 x 4 = 20
5 x 5 = 25
5 x 6 = 30
5 x 7 = 35
5 x 8 = 40
5 x 9 = 45
5 x 10 = 50

scenario-4: Even & odd Number counter

AIM:

To write a program to print the need to count even & odd

Pseudo Code:

1. Initialize the variables even & odd
2. use the for loop condition statement to check the condition
3. Then create the syntax for it.
4. Display the output

Program:

```
public class Even odd counter {
        Public static void main (String[] args){
            Scanner scanner = new Scanner (System.in);
        System.out.print ("Enter the num of elements :");
        int size = scanner.next Int ();
        for (int i=0 ; i< size ; i++){
            number[i] = scanner.next Int ();
        }
        int even count = 0;
        int odd count = 0;
        int even sum = 0;
        int odd sum = 0;
    }
    System.out.println ("Even count: " + even count + "odd count :");
    }
    scanner.close()
}
}
```

output:

Event count : 3 odd count = 2

Scenario 5: Simple ATM simulation.

AIM:

To write a program to simulation of simple ATM.

Pseudo code:

1. Initialize the variables as balance, deposit, withdrawal
2. Then use the switch case condition to implement this data case.
3. Then create the syntax to implement this
4. Display the output.

Code:

```
public class ATM simulation {
    public static void main (string[] args) {
        Scanner scanner = new scanner (System.in);
        double balance = 1000.0;
        boolean exit = false;
        while (!exit);{
            System.out.println ("Atm menu");
        int choice = scanner.nextInt ();
        switch (choice) {
            case 1:
            System.out.println ("your current balance is")
            break;
        case 2;
        System.out.print ("invalid withdrawal amt");
        break;
    }
    scanner.close();
}
```

Output.

1. Balance becomes $1200