22/08/24 CSA0914 - Java Programming R. Uchaumathi 192210608

Assignment - 1

1. Design a java program that takes a student's score as input and outputs the corresponding grade using an if-else control structure.

Aim:-

* To write a program for the student's score and Corresponding Grade.

Pseudocode:

step 1: Declare a variable to store the student's score.

step 2: Initilize the user to enter the student's score.

step 3: Read the student's score and store in variables

step 4: If the score Assign grade "A", "B", "C", "D", "F"

step 5: user else if function.

step 6: output the grade.

Code:-

```
import java.util.Scanner;
public class Student Grading System {
        Scanner scanner = new Scanner (System.in);
        System.out.print ("enter a student's score");
        int score = scanner.nextInt();
```

```
    } while (playAgain.equalsIgnoreCase("yes"));
    System.out.println("Thanks for playing!");
    scanner.close();
  }
}
```

output:-

```
I have selected a number between 1 and 10. Can
you guess it?
Enter your guess : 5
Too Low
Enter your guess : 8
    To high
Enter your guess : 7
Correct!
```

3. Create java program that takes a number as input and uses a for loop to Generates and print the multiplication table for that number (from 1 to 10).

Aim :-

Generates and print the multiplication table.

Pseudocode :-

* Initilize the table and the numbers

Pseudocode:-

step 1: Initialize a boolean variable

step 2: While "play Again" is true:

step 3: Generate a random number and counter "Attempts" to 0.

step 4: Get a boolean variable and print a Message.

step 5: For "i" from 0 to 2
Else if And Else.

step 6: If "guessed Correctly" print prompt the player

step 7: Display the output.

Code:

```
import java.util.Random;
import java.util.Scanner;
public class NumberGame {
    public static void main (string[] args){
        Scanner scanner = new Scanner (System.in);
        String PlayAgain;
If (!guessedCorrectly){
        System.out.println(" sorry, the correct
                number was "+randomNum)
}
```

4. Odd & Even Numbers:

Aim :-

To write a odd & Even number using Loops.

Pseudocode :-

* Initilize the enter the size of the array.
* To Loop, "for" Loop inside the Loop if checks each number.
* If the num is odd (not Divible by 2)
* It increments the "oddCount",
* Display the output.

Code :-

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

for (int i =0 ; i < size ; i++) {
int num = scanner.nextIn ();
if (num %. 2 ==0 ) {
        evenCount++;
} else {
        oddCount ++;
}
```

* Generate a number with for (int i=1; i<=10; i++){
* Print the numbers and System.out.print.
* Display the output.
* End.

Code :-

```
import java.util.Scanner;
public class MultipleTable {
    public static void main(String[] args){
    Scanner scanner = new Scanner(System.in);
    System.out.print("enter a num :");
    int num = scanner.nextInt();
    for (int i=1; i<=10; i++){
        System.out.println(num+"x"+i+"="+
                (num*i));
    }
    scanner.close();
    }
}
```

output:-

num = 2

2 x 1 = 2
2 x 2 = 4
2 x 3 = 6
2 x 4 = 8
2 x 5 = 10
2 x 6 = 12
2 x 7 = 14
2 x 8 = 16
2 x 9 = 18
2 x 10 = 20

Code:-

```
import java.util.Scanner;
public class Bank {
    public static void main(String[] args) {
    Scanner scanner = new Scanner(System.in);
    double balance = 0.0;
    boolean running = true;
while (running){
    switch (choice){
        case 1:
          System.out.printIn("current balance:
                              $ "+balance);
          break;
        case 2,
          System.out.printIn("Enter amount to
                              deposit : $ ");
        } break;
      case 3:
          System.out.printIn(" enter amount to
                              withdraw : $ ");
          break;
          default;
      }
          scanner.close(); } }
    }
```

output:- Banking Menu : 1. Check Balance 2. Deposit Money
3. withdraw Money 4. Exit.

```
tem.out.println("even num:"+ evenCount);
System.out.println("odd num:"+ oddCount);
scanner.close();
}
}
```

Output:-

Integer : 1, 2, 3, 4

even : 2

odd : 2.

5. Simple ATM Simulation.

Aim:-

To write a java program to allow users to check their balance, Deposit, Money & withdraw money.

Pseudocode:-

step 1: Initilize the variable, Scanner with Banking Menu.

step 2: Double balance and uses boolean running function.

step 3: Loop while, switch to calculate the Balance, Deposit, Money and withdraw.

step 4: Display the output.

```
char grade;
if (score >= 90){
    grade = "A";
} else if (score >= 80) {
    grade = "B";
} else if (score >= 70){
    grade = 'C'
}
System.out.println("The student's grade is: " +
        grade);
scanner.close();
}
}
```

Output :-

Input score = 95

The student's grade is : A

2. Implement a java program that Generates a random number between 1 and 10. Use a for loop to give the player three Attempts to guess the number.

Aim :-

To write a program that Generates a random number between 1 and 10.