

Assignment - 01

Subject name -

programming in Java

Subject code -

CSA-0914

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① Aim: To write Java Program for Student Grading System

Pseudo code +

Step 1 + Start and declare variables.

Step 2 + Get input from user Store it in Score

Step 3 + if score ≥ 90 Print Grade A
elseif score ≥ 80 Print Grade B
elseif score ≥ 70 Print Grade C
elseif score ≥ 60 Print Grade D
else score < 60 Print Grade F

Step 4 + End Program

Program +

```
import java.util.Scanner;
```

```
Public class Grade {
```

```
    Public Static void main (String[] args) {
```

```
        Scanner input = new Scanner (System.in)
```

```
System.out.println("Enter Student Score:");  
int Score = ScannerInput.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'; }  
}
```

```
else {  
    grade = 'F'; }  
}
```

```
System.out.println("The grade is: " + grade);
```

```
}
```

```
}
```

Output:

Enter the Student Score : 80

The grade is : B

Result + Code and output has successfully verified

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aim + To write a Java Program for number Guessing game

Pseudo codes

Step 1 + Begin and declare variables

Step 2 + Create class number & define range for the random number

Step 3 + declare lower = 1 & upper = 10

Step 4 + Generate a random number and declare user guess and number of hits = 3

Step 5 + Use while loop (username != number)

Step 6 + Enter user name & user guess

Step 7 + if (userguess (number to guess))

Print low, try again

else if (user Guess > number to guess)

Print high, Try again

else

Print Congratulations

Scanner close(); & end.

Program:

```
import java.util.Scanner;
import java.util.Random;

Public class Guess{

    Public static void main (String[] args) {
        Scanner input = new Scanner (System.in);
        Random random = new Random();
        int lower = 1;
        int upper = 10;
        int numberGuess = random.nextInt (upper - lower + 1)
                                + lower);
        int userGuess = 0;
        int numberOfTries = 3;
        while (userGuess != numberGuess) {
            System.out.println ("Enter your guess:");
            userGuess = input.nextInt();
            numberOfTries++;
            if (userGuess < numberGuess) {
                System.out.println ("Too low! Try again!");
            }
            else if (userGuess > numberGuess) {
                System.out.println ("Too high! Try again!");
            }
        }
    }
}
```

```
}  
else {  
    System.out.println("Congratulations" + number +  
        " in " + tries); } }
```

Output:

Enter your guess: 5
Too low! Try again
Enter your guess: 9
Congratulations you guessed the number in 2 tries

③ Aim + To write Java Program for multiplication table Program

Pseudo code:

Step 1 + Start & declare variables

Step 2 + Create class table and declare number

Step 3 + Get input number from user

Step 4 + Begin for loop (i = 0 to n) & logic
n * i = n * i & Print & end

Program:

```
import java.util.Scanner;
```

```
Public class table {
```

```
    Public Static void main (String[] args) {
```

```
        Scanner input = new Scanner (System.in);
```



```

System.out.println("Enter a number;");
int num = input.nextInt();
for (int i = 1; i <= 10; i++)
{
    System.out.println(num + "x" + i + "=" + num * i);
}
input.close();
}

```

Output:

Enter a number : 4

4x1=4
 4x2=8
 4x3=12
 4x4=16
 4x5=20
 4x6=24
 4x7=28
 4x8=32
 4x9=36
 4x10=40

④ Aim + To write Java Program for Counting even & odd numbers.

Pseudo code:

Step 1 + Start and declare variables
Step 2 + get input from user and declare even=0 & odd=0

Step 3 Begin for loop ($i = 0$ to $n-1$)

Step 4 If ($\text{number}[i] \% 2 == 0$) then $\text{even}++$
else, $\text{odd}++$ & end loop & print
even & odd & end

Program,

```
import java.util.Scanner;
```

```
Public class count{
```

```
    Public static void main(String[] args){
```

```
        Scanner input = new Scanner (System.in);
```

```
        System.out.println ("Enter number -of elements:");
```

```
        int n = input.nextInt();
```

```
        int[] number = new int [n];
```

```
        int even = 0;
```

```
        int odd = 0;
```

```
        System.out.println ("Enter numbers:");
```

```
        for (int i = 0; i < n; i++)
```

```
        {
```

```
            number[i] = input.nextInt();
```

```
            if (number[i] % 2 == 0)
```

```
                even++;
```

```
            else { odd++; }
```



```

System.out.println("No. of even numbers: " + even);
System.out.println("No. of odd numbers: " + odd);
input.close();
}

```

Output:

Enter the elements : 2 3 4 5 9 10

No. of Even Count = 3

No. of Odd numbers = 3

5 Aim - To write Java Program for ATM Simulation

Pseudocode

Step 1 Start and declare class ATM and initialize balance = 1000

Step 2 + Using while (len != 0)
 welcome to the ATM
 Please choose an option
 1) Balance 2) Deposit
 3) withdraw 4) Exit

Step 3 choice ① → balace
 choice ② → deposit
 deposit (amount > 0)
 balance += amount;

Step 2 Begin for loop ($i = 0$ to $n-1$)

Step 4 If ($\text{number}[i] \% 2 == 0$) then even++
else, odd++ & end loop & print
even & odd & end

Program,

```
import java.util.Scanner;  
Public class Count {  
    Public static void main(String[] args) {  
        Scanner input = new Scanner (System.in);  
        System.out.println ("Enter number of elements:");  
        int n = input.nextInt();  
        int [] number = new int [n];  
        int even = 0;  
        int odd = 0;  
        System.out.println ("Enter numbers:");  
        for (int i = 0; i < n; i++)  
        {  
            number[i] = input.nextInt();  
            if (number[i] % 2 == 0)  
                even++;  
            else { odd++; }  
        }  
    }  
}
```

```

int choice = scanner.nextInt();
Switch(choice){
Case 1 : System.out.println("Your current balance:" +
                             balance);
        break;
Case 2 : System.out.println("Enter amount to
                             deposit:");

        double depo = Scanner.nextDouble();

        balance += depo;
        break;
Case 3 : System.out.println("Enter amount:");
        double with = Scanner.nextDouble();

        balance -= with;
        System.out.println("Your balance: " + balance);
        break;
Case 4 : System.out.println("Thank you");
        break;

default : System.out.println("Enter correct
                             choice!!");
} } scanner.close(); } }

```

Output : welcome to ATM

Please choose an option.

1. check balance 2. Deposit amount
3. withdrawl 4. exit

enter your choice : 1

Your balance is ₹ 1000.0

enter your choice : 4