

Assignment-1 Java Programming Prajesh 192211033

(① Aim:- To write a java program for calculating student grade based on marks.

Pseudocode:-

- ⇒ Initialize the variables
- ⇒ Get the input marks from the user
- ⇒ Based on the marks category assign the grade for eg if
marks > 90 grade = A
- ⇒ print the grade.

Program:-

```
Package assignment;  
import java.util.Scanner;  
public class grade {  
    public static void main (String[] args) {  
        Scanner input = new Scanner (System.in);  
        System.out.print ("Enter your marks");  
        int m = input.nextInt();
```

```
    char grade;  
    if (m >= 90)  
        grade = 'A';  
    else if (m < 90 & m >= 80)  
        grade = 'B';  
    else if (m < 80 & m >= 70)  
        grade = 'C';  
    else if (m < 70 & m >= 60)  
        grade = 'D';  
    else if (m < 60 & m >= 50)  
        grade = 'E';  
    else if (m < 50 & m >= 40)  
        grade = 'F';  
    else if (m < 40 & m >= 30)  
        grade = 'G';  
    else if (m < 30 & m >= 20)  
        grade = 'H';  
    else if (m < 20 & m >= 10)  
        grade = 'I';  
    else if (m < 10 & m >= 0)  
        grade = 'J';  
    else  
        grade = 'K';  
    System.out.println ("Grade = " + grade);  
}
```

Sample output:- Enter your marks = 70 Grade = C

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

```
    char grade;  
    if (m  $\geq 90$ )  
        grade = 'A';  
    else if (m < 90 & m  $\geq 80$ )  
        grade = 'B';  
    else if (m < 80 & m  $\geq 70$ )  
        grade = 'C';  
    else if (m < 70 & m  $\geq 60$ )  
        grade = 'D';  
    else if (m < 60 & m  $\geq 50$ )  
        grade = 'E';  
    else if (m < 50 & m  $\geq 40$ )  
        grade = 'F';  
    else if (m < 40 & m  $\geq 30$ )  
        grade = 'G';  
    else if (m < 30 & m  $\geq 20$ )  
        grade = 'H';  
    else if (m < 20 & m  $\geq 10$ )  
        grade = 'I';  
    else if (m < 10 & m  $\geq 0$ )  
        grade = 'J';  
    else  
        grade = 'K';  
    System.out.println ("Grade = " + grade);  
}
```

Sample output:- Enter your marks = 70 Grade = C

② Aim:- To write Java program for guessing a simple number b/w 1 & 10.

Pseudocode:-

⇒ Assign the variables.

⇒ Using random function assign any number b/w 1 to 10.

⇒ Ask the user to guess that number give 3-chars.

⇒ If number is smaller, greater or equal print.

⇒ If user lost then print the system guessed number.

Program:-

```
import java.util.Scanner;
public class number-guess{
    public static void main(String []args){
        Scanner input = new Scanner (System.in);
        Random random = new Random ();
        int r = random.nextInt (10)+1;
        int i;
        for (i=0; i<3; i++){
            int a = input.nextInt ();
            if (r>a){
                System.out.print ("to low");
            }
        }
        else {
            System.out.print ("you win");
        }
    }
}
```

Sample output:- Guess any number b/w 1 to 10:?

(2)

③ Aim:- To write Java program for generating and displaying the multiplication table

Pseudo code:-

⇒ Initialize the variables.

⇒ Get the input number from the user.

⇒ Using for loop generate the multiplication table by multiplying it with i number.

⇒ Display the multiplication table.

Program:-

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

Sample output:- enter the number: 7

$$7 \times 1 = 7 \quad 7 \times 4 = 28 \quad 7 \times 2 = 14$$

$$7 \times 3 = 21 \quad 7 \times 5 = 35 \quad 7 \times 6 = 42$$

$$7 \times 7 = 49 \quad 7 \times 8 = 56 \quad 7 \times 9 = 63$$

$$7 \times 10 = 70$$

④ Aim:- To write Java program for even and odd counter.

PseudoCode:-

- => Initialize the variables.
- => Declare some number in average.
- => Check each number is divisible by 2.
- => If divisible then it is even else it is odd number.

Program:-

```
import java.util.Scanner;  
public class evenOddCount {  
    public static void main(String[] args) {  
        Scanner input = new Scanner(System.in),  
        int []a = {2,3,4,5,6},  
        int ec = 0, oc = 0;  
        for (int i=0; i < a.length; i++)  
        {  
            if (a[i] % 2 == 0)  
            {  
                ec++;  
            }  
            else  
            {  
                oc++;  
            }  
        }  
    }  
}
```

Sample output:-

number of even number = 3

number of odd number = 2

⑤ Aim To write java program for simulating
a basic ATM system.

Program:-

```
import java.util.Scanner;  
public class atm{  
    public static void main(String []arg){  
        Scanner input = new Scanner(system.in);  
        int i=1000;  
        boolean ch = true;  
        while(ch){  
            System.out.println("choose the operation we. Deposit/Withdrawal");  
            int a = input.nextInt();  
            if(a==1){  
                System.out.print("enter the amount to deposit");  
                int d = input.nextInt();  
                i+=d;  
                System.out.print("In. amount deposited successfully");  
            }  
            else if(a==2){  
                System.out.print("enter the amount to withdraw");  
            }  
        }  
    }  
}
```

```
int w=input.nextInt();
if (n>w)
    n=w;
else
    System.out.print("insufficient balance\n");
}
```

Sample output.

Choose the operation 1. Deposit 2. withdraw 3. check
Balance 4. exit