Aim:

To write a java program for calculating students grade based on marks

Algorithm:

1) Initialize the variables
2) get the input marks from the user
3) Based on the marks category assign the grade for eg if marks > 90 grade A
4) Print the grade

Program

```
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
       grade = 'F';
    System.out.print("Grade = " + grade);
  }
```

Sample output

enter your marks : 74
Grade : C

2. Aim : To write Java program for guessing a simple number between 1 and 10

Pseudocode :

1) assign the variables
2) using random function assign any no. between 1 to 10
3) ask the user to guess that number. give 3 chances to user using for loop
4) If user lost then print the system guessed number

Program :

```
Random random = new Random();
System.out.print("guess any number between 1 to 10: ");
```

```
int r= random.nextInt(10)+1;
int i;
for(i=0; i<3;i++)
{ int a=input.nextInt();
 if (r>a)
 { system.out.print ("too low");
 }else if (r<a)
 { system.out.print ("too high");
 }else
 {
  system.out.print ("you win");
  system.exit (0);
 }
 if (i<2)
  system.out.print ("\n try again:");
}
 if (i>=3)
 {
  system.out.print("\n you lost \n System guessed "+r+" better
    luck next time");
 }
}
```

Sample output

guess any number between 1 to 10 : 7

too high

try again: 5

too low

try again : 8
too high
you lost
system guessed 6. better luck next time

3. Aim:

To write java program for generating and displaying the multiplication table

Pseudo code:

1) Initialize the variables
2) get the input number from the user
3) using for loop generate the multiplication table by multiplying i with number
4) display the multiplication table

Program

```
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 * 1 = 7

7 * 2 = 14

7 * 3 = 21

:

7 * 10 = 70

Aim: To write java program for even and odd counter

Pseudo code:

1) Initialize the variable

2) declare some number in array

3) check each number is divisible by 2

4) if divisible then it is even else it is odd number

Program:

```
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
{
 oct++;
}
}
System.out.print("no. of even numbers: "+ec);
System.out.print("no. of odd numbers: "+oc);
}}
```

Sample output

```
no. of even numbers = 3
no. of odd numbers = 2
```

5 Aim

To write java program for simulating a basic ATM system

Pseudo Code:

```
import java.util.Scanner;
Public class atm {
Public static void main (String[ ] args) {
   Scanner input = new Scanner (System.in);
    int i=1000;
    boolean ch = true;
    while (ch) {
  System.out.println ("choose the operation\n 1. Deposit \n
                2. with Drawln 3. Check Balance \n4. exit");
```

```
int a= input.nextInt();
if (a==1)
{
 System.out.print("enter the amount to deposit:");
 int d = input.nextInt();
 int =d;
 System.out.print("\n Amount Deposited successfully");
}
else if (a==2)
{
 System.out.print("enter the amount to withdraw:");
 int w= input.nextInt();
  if (in>w)
  in-=w;
 else
 System.out.print("Insufficient balance\n");
 system.out.print("Balance updated successfully\n");
}
else if (a==3)
{
 System.out.print("\n your Balance : "+int "\n");
 }
else
{
  System.out.print("closing...");
  System.exit(0);
}}}
```

Sample output

1) enter the amount to deposit : 200

Choose the operation : 2

enter the amount to withdraw: 150

Balance updated successfully

Choose the operation: 3

Available Balance : 1050

choose the operation: 4