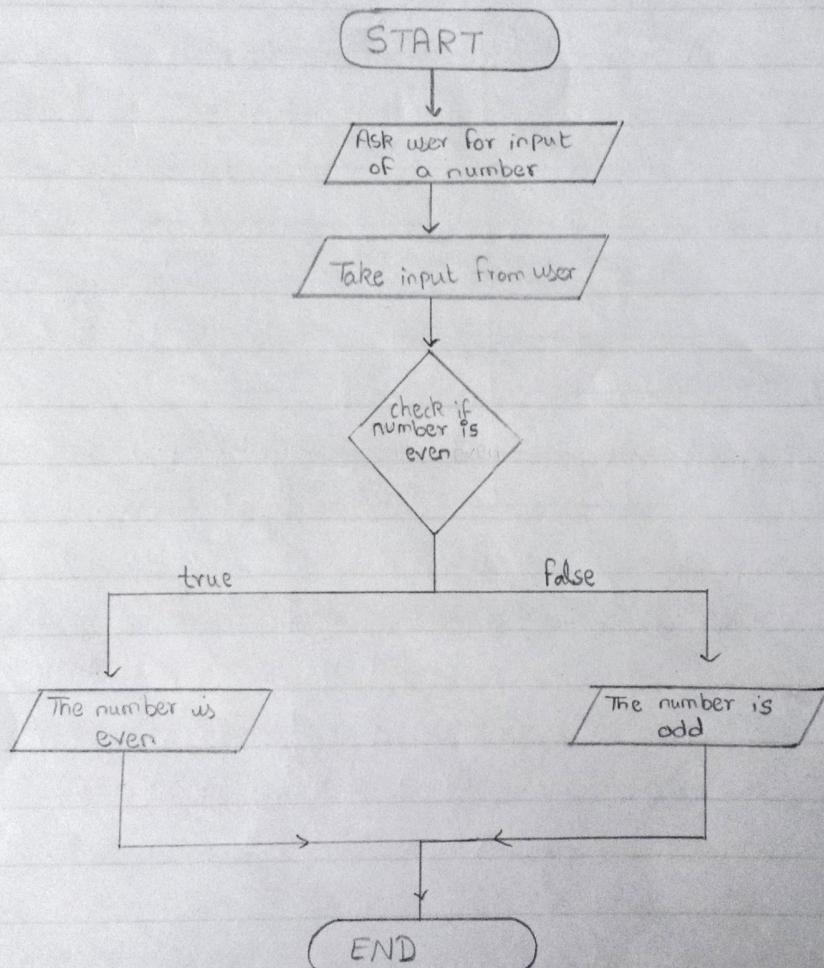


Practical No. 02

Aim: Create, debug and run java programs based on decision making and branching.

Flowchart:



Flow chart : code 1

Practical No. 02

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Theory:

What is branching?

→ When a break-of-flow occurs in a program and it jumps to another part of the code, it is called as branching. When branching is based on a condition, it is known as conditional branching.

When branching is not based on any conditions, it is known as unconditional branching.

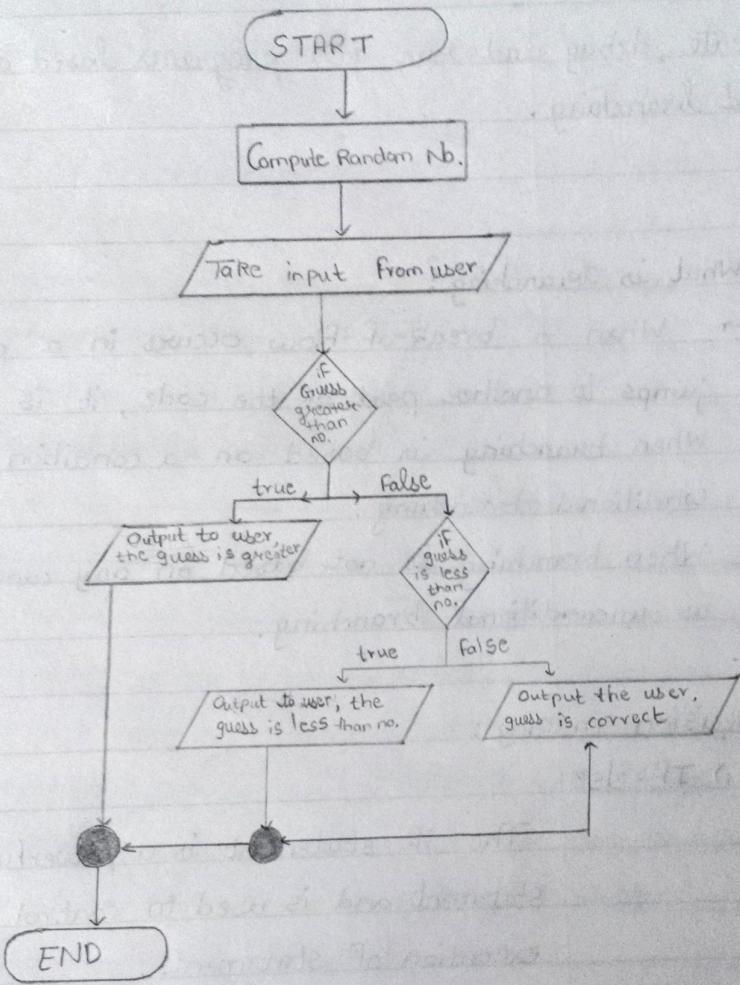
Decision making:i) IF - else

The if statement is a powerful decision making statement and is used to control the flow of execution of statements.

The if-else statement is the extension of the simple if statement.

If the test expression is true, then the true-block statement(s) immediately following if statement are executed.

Otherwise, the false block's statement(s) are executed.



Flow chart : code 2

Syntax:

```
if (condition){  
    // code statements  
} else {  
    // code statements  
}
```

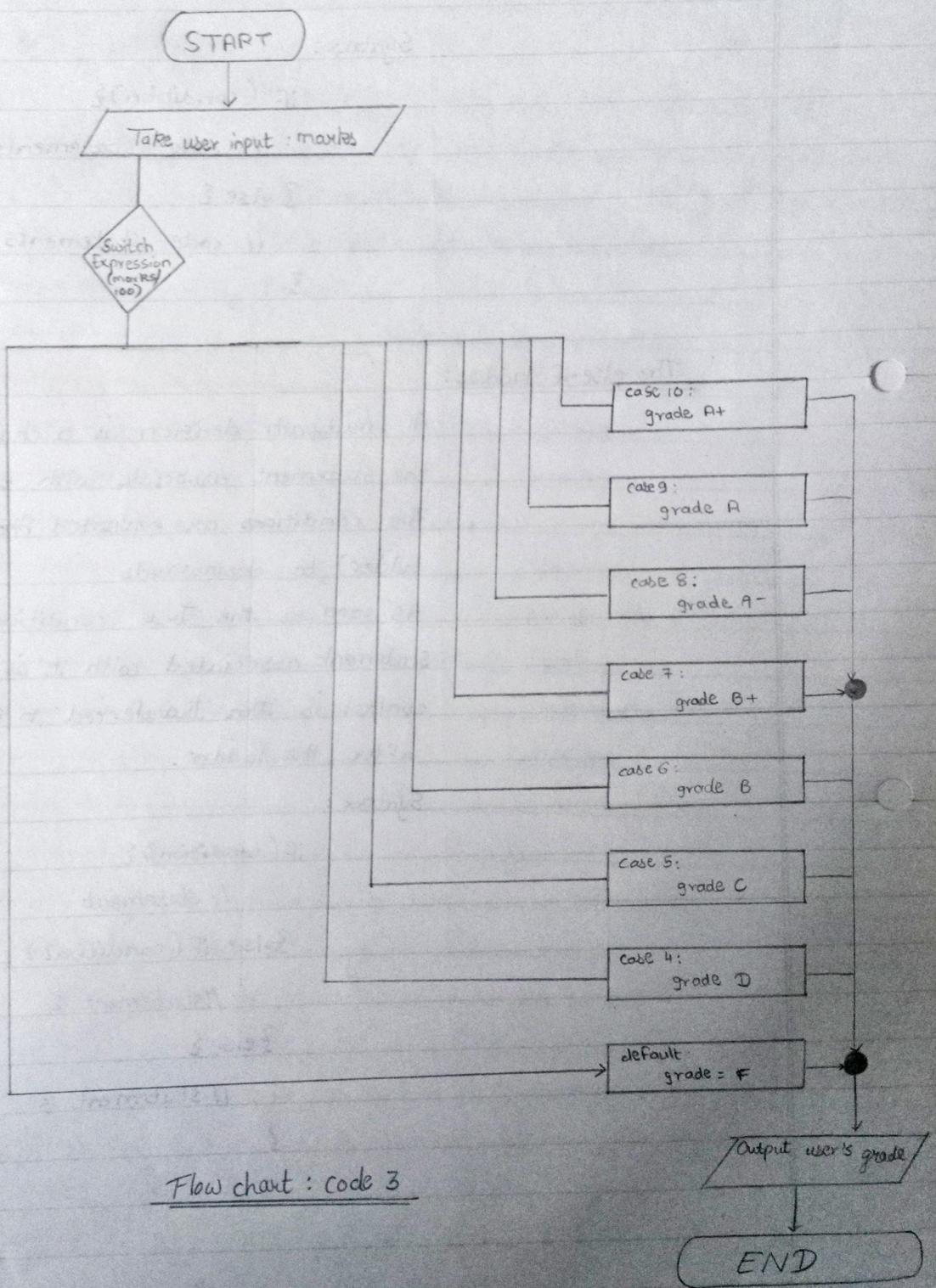
The else-if ladder:

A multipath decision is a chain of ifs in which the statement associate with each else is an if. The conditions are evaluated from the top (of the ladder), to downwards.

As soon as the true condition is found, the statement associated with it is executed and the control is transferred to the statement after the ladder.

Syntax :

```
if (condition){  
    // statement  
} else if (condition2){  
    //statement 2  
} else {  
    // statement 3  
}
```



The switch statement:

The switch statement tests the value of a given variable ,against a list of case values and when a match is found ,a block of statements associated with it is executed.

Syntax:

switch (expression) {

case 1 :

 statement 1;

 break;

case 2 :

 Statement 2;

 break;

default :

 Statement 3;

 break;

}

Conclusion :

Hence, by performing this practical, I learnt about decision making, and branching. I also created, debugged and executed three java programs on the concepts of if-else, if-else ladder, and switch respectively.