

Name - Ameya D.

Name - Ameya Barapatre

Roll No - 06

SE-DS

SARASWATI Education Society's

SARASWATI College of Engineering

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Experiment - 02

→ Aim - To implement a java program for branching and looping

Resource Required : Pentium IV, JDK 1.8, NotePad

→ Theory :

A control statement that controls the flow of the program Java program control statement is divided into 3 categories.

→ Selection statements : If and switch

Iteration statements : While, do-while and for loop

→ Statements :

Selection statement controls the flow of the program depending on the result of the condition of the state of variable there are two selected statements if and switch.

→ if statements :

if (condition)

statements;

else

statement 2;

~~Nested if-else~~

→ Nested- if statements

```
if (condition)
```

```
{
```

```
    if (condition)
```

```
        Statement;
```

```
}
```

(If else if ladder. If else statement is a sequence of if else statements)

```
if (condition)
```

```
    statements;
```

```
else if (condition)
```

```
    Statement 2;
```

```
else if (condition)
```

```
    Statement 3;
```

```
else statement 4;
```

In if else ladder of a condition is not met then it cannot flow from top to bottom until we met if statement such as statements.

It provides more than one choice to choose it better after nature to if-else if ladder.

Syntax :

```
switch ( expression)
```

```
{
```

```
    case value 1 : Statement 1;
```

```
    break;
```

```

case value 2 : statement 2;
break;
case value 3 : statement 3;
break;
case value 4 : statement N;
break;
default : statement;
}

```

2. ^{Iteration}~~Iteration~~ Statements:

These statements allow the part of the program to repeat one or more times until some condition becomes true. There are 3 iteration statements: ~~while do while and for~~.

→ ~~while~~ statement

```

while (condition)
{
    // body of the loop
} while (condition);

```

→ ~~for~~ statement :-

```

for (initialization; condition; iteration)
{
    // body of the loop
}

```

Do-while →

```

do { // body of loop; } while (condition);

```


Jump Statement :

Jump statement allows to control to jump to a particular position. There are 3 types of jump statements -

a) break statement :

b) ~~continue statement~~ In Java there are 3 types of break statements:-

Sequence in switch statement

C. return statement: This is used to return from a method when the control reaches to return statement in ^{case} ~~case~~ ~~case~~

Cont