# ASSIGNMENT-1

- Difference between else-if and switch

| Else-if statement | Switch statement |
|---|---|
| The if-else statement is used to choose between two options. | switch case statement is used to choose between numerous options. |
| If the condition inside the if block is false, the statement inside the else block is executed. | If the condition inside the switch statement is false, the default statements are run. |
| In if-else-if ladder statement there is no necessity of break statement. | In switch statement each case of switch the last statement must be the break statement. |
| It can compare two variables, 2 constants and even a variable and a constant. | It can compare only a variable and a constant. |
| It can compare any two types of data. | It can compare only integers and characteristics. |
| In if-else, the values are based on conditions. | In the switch case, the values are based on user preference. |
| Sequence of execution is like either statement under if block statement will execute or statement under else block will execute. | The expression in switch statement decides which case to execute and if there is do not apply a break statement after each case it will execute till the end of switch statement. |

# ASSIGNMENT-2

## ➢ Nested simple-if:

Nested if condition means if-within-if. Nested if condition comes under decision-making statement in Java. There could be infinite if conditions inside an if condition. The below syntax represents the Nested if condition.

**Syntax**:

```
if (condition) {
    if (condition) {
        if (condition) {
            .....
        }
    }
}
```

**Example:**

```
public class Test {
  public static void main (String args[]) {
    int x = 30;
    int y = 10;
    if (x == 30) {
      if (y == 10) {
        System.out.print("X = 30 and Y = 10");
      }
    }
  }
}
```

## ➢ Nested if-else:

It means an if-else statement inside another if statement. Or in simple words first, there is an outer if statement, and inside it another if – else statement is present and such type of statement is known as nested if statement. We can use one if or else if statement inside another if or else if statements.

**Example:**

```
public class code {
   public static void main (String [] args) {
       int n=24;
       if (n % 2 == 0){
          System.out.print("Even ");
          if (n % 6 == 0) {
             System.out.println("and divisible by 6");
          } else {
             System.out.println("and not divisible by 6");
          }
       }
else {
          System.out.println("Odd ");
                   if (n % 3 == 0) {
             System.out.println("and divisible by 3");
          } else {
             System.out.println("and not divisible by 3");
          }
       }
    }
}
```