Course Code	OCAJP8
Section	Topic_3
Student Name	Dominic Kgoete
Student Signature	
Date	15 – 01 - 2020

1. **Program Objective and Summary**

- Use Java operators; including parentheses to override operator precedence
- Test equality between Strings and other objects using == and equals ()
- Create if and if/else and ternary constructs
- Use a switch statement

2. **Tools (Clearly state the IDE, Databases, languages used)**

Intellj IDEA

3. **Code**

```
/*
**** Topic 3: Using Operators and Decision Constructs ****
* OBJECTIVES:
* 1 Use Java operators; including parentheses to override operator precedence
* 2 Test equality between Strings and other objects using == and equals ()
* 3 Create if and if/else and ternary constructs
* 4 Use a switch statement
*/
package com.company;

import java.sql.SQLOutput;
import java.util.Scanner;

public class Main {

    public static void main(String[] args) {
        System.out.println("Topic 3: Using operators and Decision Constructs");
        part1(); // operators, operands and expressions
        part2(); // Using switch statement
    }
    public static void part1() {
        /*
            Three types of operators:
            - infix: expr <op> expr, e.g. 2 + 2
            - prefix: <op> expr, e.g. -5
            - postfix: expr <op>, e.g. i++

            Java has operator overloading predefined
             no programmer-defined
         */
        Scanner scanner = new Scanner(System.in);
        // infix
        System.out.println("Operators, operands and expressions");
```

```java
        System.out.println("Please enter any two integers to multiply: ");
        int number1 = scanner.nextInt();
        int number2 = scanner.nextInt();
        int results = number1 * number2;

        // prefix
        System.out.println("results of your numbers turned into a negative number: " + -results); // -4
        System.out.println("Results incremented then added to the results: " + ++results); // 5;
increment a, then get value
        System.out.println((results--) + ": number1 * number2 then + 1 then - 1");
        // postfix
        System.out.println(results); // 4

        /*
           arithmetic operators and operator precedence
        */
        System.out.println("arithmetic operators and operator precedence");

        System.out.println("Modulo".toUpperCase());
        System.out.print("Please enter number between 0 and 9: ");
        int number = scanner.nextInt();
        /*
           below are if and else statements constructs plus equality operator
         */
        if(number % 2 == 0) // == is the boolean expression
           System.out.println(number + " is an EVEN number");
        else
           System.out.println(number + " is an ODD number");
    }

  public static void part2(){
     Scanner scanner = new Scanner(System.in);

     System.out.println("Using Switch statement to find day of the weeek");
     System.out.print("Please enter a number between 1 and 7 to find out: ");

     int week = scanner.nextInt();
     String day;

     switch (week) {
        case 1:
           day = "Sunday is the 1st day of the week";
           break;
        case 2:
           day = "Monday is the 2nd day of the week";
           break;
        case 3:
           day = "Tuesday is the 3rd day of the week";
           break;
        case 4:
```

```
            day = "Wednesday is the 4th day of the week";
            break;
        case 5:
            day = "Thursday is the 5th day of the week";
            break;
        case 6:
            day = "Friday is the 6th day of the week";
            break;
        case 7:
            day = "Saturday is the 7th and last day of the week";
            break;
        default:
            day = "Invalid day";
            break;
        }
        System.out.println(day);
    }
}
```

4.   **Output (Please attach screen output as evidence)**

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```
Main ×

"C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.3.1\
Topic 3: Using operators and Decision Constructs
Operators, operands and expressions
Please enter any two integers to multiply:


2
2

results of your numbers turned into a negative number: -4
Results incremented then added to the results: 5
5: number1 * number2 then + 1 then - 1
4
arithmetic operators and operator precedence
MODULO
Please enter number between 0 and 9: 5
5 is an ODD number
Using Switch statement to find day of the weeek
Please enter a number between 1 and 7 to find out: 1
Sunday is the 1st day of the week


Process finished with exit code 0
```

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```
Main ×

"C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.
Topic 3: Using operators and Decision Constructs
Operators, operands and expressions
Please enter any two integers to multiply:
5
5
results of your numbers turned into a negative number: -25
Results incremented then added to the results: 26
26: number1 * number2 then + 1 then - 1
25
arithmetic operators and operator precedence
MODULO
Please enter number between 0 and 9: 8
8 is an EVEN number
Using Switch statement to find day of the weeek
Please enter a number between 1 and 7 to find out: 5
Thursday is the 5th day of the week


Process finished with exit code 0
```

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```
Main ×
"C:\Program Files\JetBrains\IntelliJ IDEA Community Edition 2019.3
Topic 3: Using operators and Decision Constructs
Operators, operands and expressions
Please enter any two integers to multiply:
2
3
results of your numbers turned into a negative number: -6
Results incremented then added to the results: 7
7: number1 * number2 then + 1 then - 1
6
arithmetic operators and operator precedence
MODULO
Please enter number between 0 and 9: 1
1 is an ODD number
Using Switch statement to find day of the weeek
Please enter a number between 1 and 7 to find out: 8
Invalid day

Process finished with exit code 0
```

5. **Completed Practical Assignment Template**
   Completed Practical Assignment Template and attach it on LMS as a pdf file