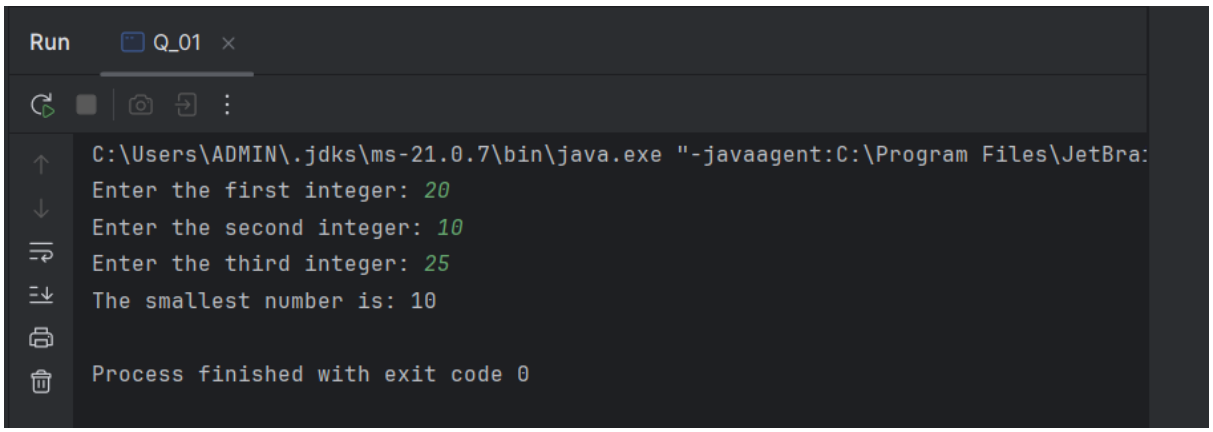
Lab worksheet 4: Selection Statements

Q1.

Code:

```
import java.util.Scanner;

    public class Q_01 {
        public static void main(String[] args) {

            Scanner scanner = new Scanner(System.in);

            //get user input
            System.out.print("Enter the first integer: ");
            int num1 = scanner.nextInt();

            System.out.print("Enter the second integer: ");
            int num2 = scanner.nextInt();

            System.out.print("Enter the third integer: ");
            int num3 = scanner.nextInt();

            // Initialize smallest with the first number
            int smallest = num1;

            if (num2 < smallest) {
                smallest = num2;
            }

            if (num3 < smallest) {
                smallest = num3;
            }

            System.out.println("The smallest number is: " +
                    smallest);
            scanner.close();
        }


    }
```

Output:


Run
Q_01
C:\Users\ADMIN\.jdks\ms-21.0.7\bin\java.exe "-javaagent:C:\Program Files\JetBra
Enter the first integer: 20
Enter the second integer: 10
Enter the third integer: 25
The smallest number is: 10
Process finished with exit code 0

Q2

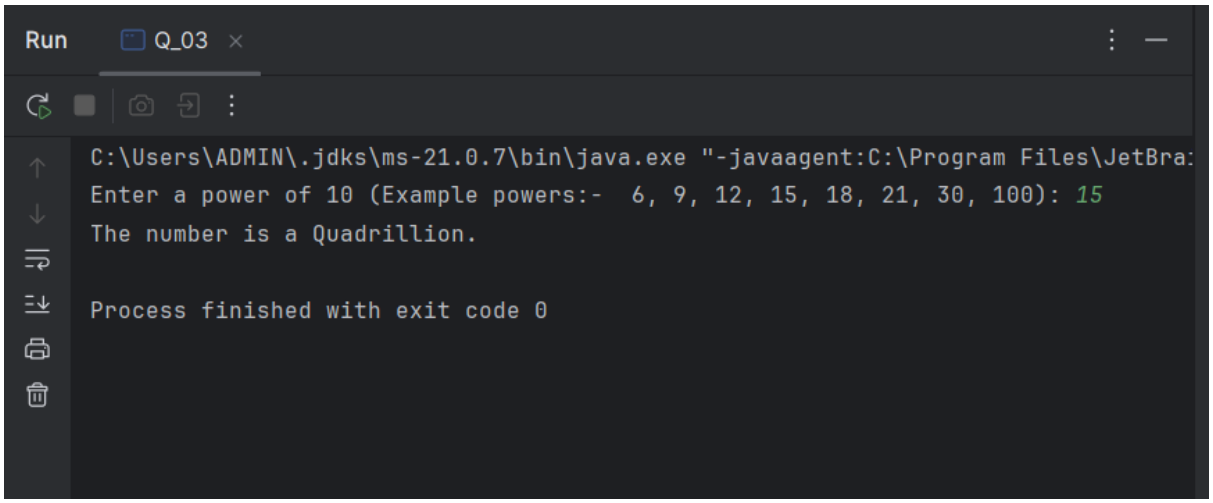
```
package Q_02;

import java.util.Scanner;

public class Q_02 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.println("0. Magenta");
        System.out.println("1. Cyan");
        System.out.println("2. Red");
        System.out.println("3. Blue");
        System.out.println("4. Green");
        System.out.println("Select one color from the above
list:");

        int selection = scanner.nextInt();
        switch (selection) {
            case 0:
                System.out.println("You selected Magenta");
                break;
            case 1:
                System.out.println("You selected Cyan");
                break;
            case 2:
                System.out.println("You selected Red");
                break;
            case 3:
                System.out.println("You selected Blue");
                break;
            case 4:
                System.out.println("You selected Green");
                break;
            default:
                System.out.println("Invalid selection");
                break;
        }
        scanner.close();
    }
}
```

Output

Q3

```
package Q_03;

import java.util.Scanner;

public class Q_03 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter a power of 10 (Example
powers:-  6, 9, 12, 15, 18, 21, 30, 100): ");
        int power = scanner.nextInt();

        String numberName;
        switch (power) {
            case 6:
                numberName = "Million";
                break;
            case 9:
                numberName = "Billion";
                break;
            case 12:
                numberName = "Trillion";
                break;
            case 15:
                numberName = "Quadrillion";
                break;
            case 18:
                numberName = "Quintillion";
                break;
            case 21:
                numberName = "Sextillion";
```

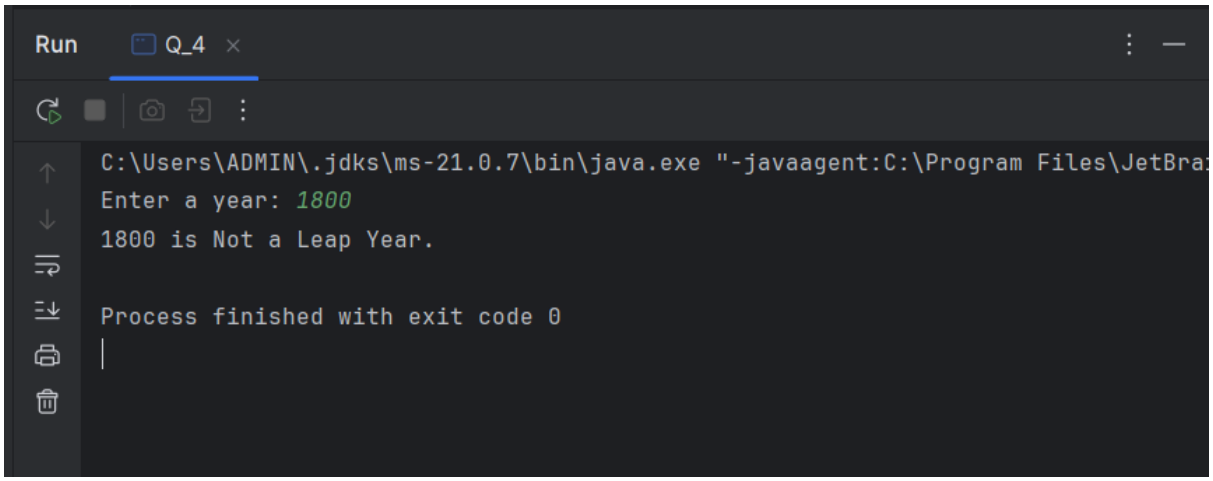
```
                break;
            case 30:
                numberName = "Nonillion";
                break;
            case 100:
                numberName = "Googol";
                break;
            default:
                numberName= null;
                break;
        }
        if (numberName != null) {
            System.out.println("The number is a " +
                    numberName + ".");
        } else {
            System.out.println("No corresponding word for 10
to the power of " + power + ".");
        }

        scanner.close();
    }
}
```



Q4

```
package Q_4;

import java.util.Scanner;

    public class Q_4 {
        public static void main(String[] args) {
            Scanner scanner = new Scanner(System.in);

            System.out.print("Enter a year: ");
```

```
            int year = scanner.nextInt();

            // Check if the year is a leap year
            if (isLeapYear(year)) {
                System.out.println(year + " is a Leap
Year.");
            } else {
                System.out.println(year + " is Not a Leap
Year.");
            }

            scanner.close();
        }

        // Method to determine if a year is a leap year
        public static boolean isLeapYear(int year) {
            if (year % 4 == 0) {
                if (year % 100 == 0) {
                    return year % 400 == 0;
                } else {
                    return true;
                }
            }
            return false;
        }
    }
```



Q5

```
package Q_05;

import java.util.Scanner;

public class Q_05 {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);

        System.out.println("\nEntree\t\t\tSide
Dish\t\t\tDrink");
                System.out.println("1. Tofu
Burger\t\t$3.49\t5. Rice Cracker\t\t$0.79\t9. Cafe
Mocha\t\t$1.99");
        System.out.println("2. Cajun Chicken\t$4.59\t6. No
Salt Fries\t$0.69\t10. Cafe Latte\t\t$1.90");
        System.out.println("3. Buffalo Wings\t$3.99\t7.
Zucchini\t\t\t$1.09\t11. Espresso\t\t$2.49");
        System.out.println("4. Rainbow Fillet\t$2.99\t8.
Brown Rice\t\t$0.59\t12. Oolong Tea\t\t$0.99");

        System.out.print("\nPlease enter the item number you
want: ");
```

```
        int item = scanner.nextInt();

        switch (item) {
            case 1:
                System.out.println("Tofu Burger is $3.49");
                break;
            case 2:
                System.out.println("Cajun Chicken is $4.59");
                break;
            case 3:
                System.out.println("Buffalo Wings is $3.99");
                break;
            case 4:
                System.out.println("Rainbow Fillet is
$2.99");
                break;
            case 5:
                System.out.println("Rice Cracker is $0.79");
                break;
            case 6:
                System.out.println("No-Salt Fries is $0.69");
                break;
            case 7:
                System.out.println("Zucchini is $1.09");
                break;
            case 8:
                System.out.println("Brown Rice is $0.59");
                break;
            case 9:
                System.out.println("Cafe Mocha is $1.99");
                break;
            case 10:
                System.out.println("Cafe Latte is $1.90");
                break;
            case 11:
                System.out.println("Espresso is $2.49");
                break;
            case 12:
                System.out.println("Oolong Tea is $0.99");
                break;
            default:
                System.out.println("Invalid entry");
                break;
        }

        scanner.close();
    }
}
```


Run
Q_05
Entree Side Dish Drink
1. Tofu Burger $3.49 5. Rice Cracker $0.79 9. Cafe Mocha $1.99
2. Cajun Chicken $4.59 6. No Salt Fries $0.69 10. Cafe Latte $1.90
3. Buffalo Wings $3.99 7. Zucchini $1.09 11. Espresso $2.49
4. Rainbow Fillet $2.99 8. Brown Rice $0.59 12. Oolong Tea $0.99
Please enter the item number you want: 7
Zucchini is $1.09
Process finished with exit code 0