COMP1331 – JAVA 1
Assignment 1

Objectives:

1. To understand basic problem-solving techniques using Java Programming Language.
2. To declare Java primitive data types. In addition, to obtain input and display output.
3. To be able to use arithmetic and use different control structures (Decision making and Loops)
4. To create methods, invoke methods, and pass arguments to a method
5. To solve problems using recursion techniques.

Specification

Use Eclipse to do the following.
What to hand in:
A softcopy of the (well-structured, **well-commented**) JAVA code you wrote should be submitted on Ritaj on a message called Assignment_one (SpecialPrimes.java)
Deadline: Wednesday 10/05/2023 11:59pm.

Task

(SpecialPrimes Numbers)

Write a program that allows the user to enter any two integers (a and b) and displays the following results based on the menu shown below:

1. Print all the prime numbers between a and b.
2. Print all the special prime numbers (prime and containing the digit 2) between a and b.
3. Print all the special prime numbers between a and b, each number should be printed in reverse order using recursion.
4. Exit.

Your program should always accept a pair of integers a and b with each selected choice and ensure that **a** is always less than **b**. If not, the program should swap them. Your program should also include at least 3 methods:

public boolean isPrime(int x)

public boolean containsTwo(int x)

public void printReverse(int x)

Notice: you are not allowed to use any of ready methods such as Math.pow… etc.

Sample Run:

```
1-Print primes between a and b
2-Print special primes between a and b
3-Print special primes (reverse numbers) between a and b using recursion
4-Exit

Enter your choice:2
Enter a: 20
Enter b: 30
23
29

Enter your choice:3
Enter a: 20
Enter b: 30
32
92

Enter your choice:4
Good Bye…
```