Exercise 1: Implementing the Singleton Pattern

Logger.java

package singleton;

public class Logger {

    private static Logger instance;

    private Logger() {

        System.out.println("Logger initialized");

    }

    public static Logger getInstance() {

        if (instance == null) {

            instance = new Logger();

        }

        return instance;

    }

    public void log(String message) {

        System.out.println("Log: " + message);

    }

}

Logger.class

package singleton;

public class Logger {

   private static Logger instance;

   private Logger() {

      System.out.println("Logger initialized");

   }

   public static Logger getInstance() {

      if (instance == null) {

         instance = new Logger();

      }

      return instance;

   }

   public void log(String var1) {

      System.out.println("Log: " + var1);

   }

}

Main.java

package singleton;

public class Main {

  public static void main(String[] args) {

        Logger logger1 = Logger.getInstance();

        Logger logger2 = Logger.getInstance();

        logger1.log("This is the first message.");

        logger2.log("This is the second message.");

        if (logger1 == logger2) {

            System.out.println("Both references point to the same instance.");

        } else {

            System.out.println("Different instances exist. Singleton failed.");

        }

    }

}

