**Exercise 1: Implementing the Singleton Pattern**

class Main {

public static void main(String[] args) {

Logger logger1=Logger.getinstance();

Logger logger2=Logger.getinstance();

logger1.log("Logging from Logger1");

logger2.log("Logging from Logger2 ");

if(logger1==logger2){

System.out.println("Singleton class confirmed ");

}

else{

System.out.println("Singleton class failed");

}

}

public static class Logger{

private static Logger instance;

private Logger(){

System.out.println("Logger instance created");

}

public static Logger getinstance(){

if(instance==null){

instance= new Logger();

} return instance;

}

public void log(String message) {

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

}

}

}

OUTPUT:

