**Exercise 1: Implementing the Singleton Pattern**

Code :

class SingletonPatternExample{

    static class logger{

        private static logger instance;

        private logger(){

            System.out.println("instant created");

        }

        public static logger getLogger(){

            if( instance== null){

                instance = new logger();

            }

            return instance;

        }

        public void log(String message){

            System.out.println(message);

        }

    }

    public static void main(String[] args) {

       logger logger1 = logger.getLogger();

       logger logger2 = logger.getLogger();

       logger1.log("welcome to the application");

       logger2.log("logger logied in to the system !");

       if(logger1==logger2){

        System.out.println("same instance is used");

       }

       else{

        System.out.println("Different instance is used");

       }

    }

}

OUTPUT:

