Assignment: 7

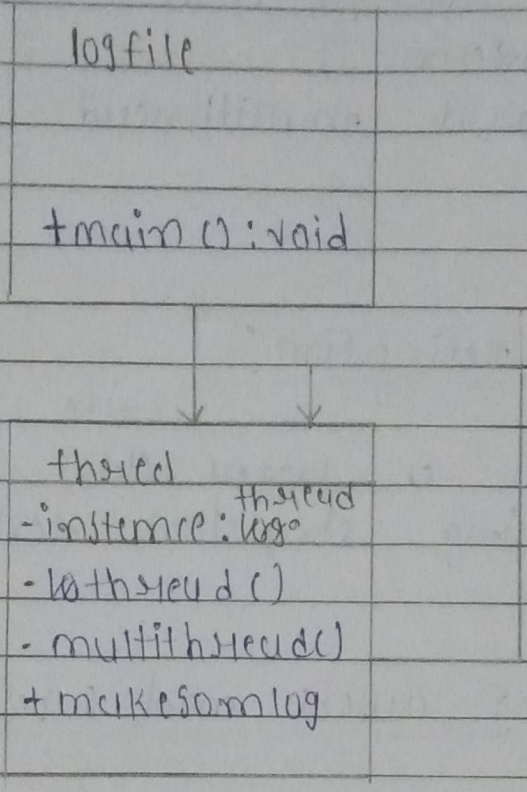
* write a program to implement a logger class or configuration class using singleton design pattern.
(It support multithread and global access)

* Problem Defination:-
write a program to implement a logger class or configuration class using singleton design pattern.

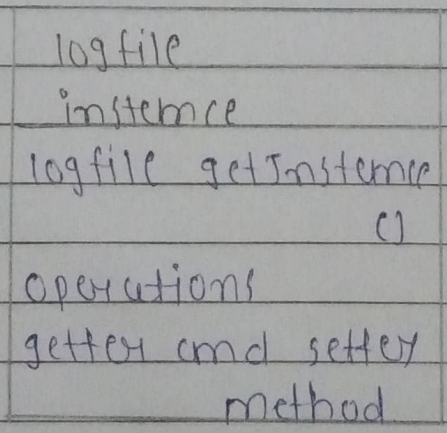
* Identifying classes and subclasses:-

1. logfile (main class)
2. thread (logger class)

* class Diagram :-



* Structure Diagram :-



* motivation :-

- make sure that no other instance are created.

- make the class responsible for keeping track of its instance.

* Applicability :-

- when the instance must be globally accessible.

* Participants :-

- Singleton
  - Define an instance operation that lets clients access its unique instance. Instance is a class operation.

- Client
  - Access a singleton instance solely through the singleton's instance() method.

* Intents:-

Ensure a class has only one instance, & provide a global point of access to it.

* Advantages:-

- Take responsibilities to managing that instance away from the programmer.
- Save memory.

* Disadvantages:-

- CPU time is also wasted in creation of instance if it is not required.
- Exception handling is not possible.