

Introduction to computer networking

Projet 2 – Minesweeper HTTP

Software architecture : to be able to implement a server application using Java Sockets we have created several classes. The first class is the MinesweeperServer which can take care of starting the server and having it heard on port 8014. he will then wait for a client to connect and as soon as it is done he will create a threadWorker which is another one of no classes. Threadworker will actually manage the server - client interaction. This class will have a whole series of functions that allow to answer the POST or GET that the client will send. We also have two class LeaderboardHTML and MinesweeperHTML that will allow to dynamically generate the client's html page. The Session class and SessionManager will take care of everything that is cookie, in other words thanks to these two classes we will be able to retain information about the user. The ProtocolMP class will be useful to manipulate the grid of the game, it is who will deal with flag, bomb, reveal the cells. The last class is WebSocket class allows a two-way data exchange without HTTP request

Multi-thread coordination : The different threads are handled by the ThreadWorker class which as name indicates will handle a single thread. in the Class MinesweeperServer initialize the maximum number of threads with a threadpool and then transfer the job to the thread worker class

Limits :

Possible Improvements : Our code does not work completely there are a lot of things that could be improved