

**General Information About the Project**

There is only the main class in the project, which contains the main function and two additional functions, which being ClientThreadFunc and SystemThreadFunc. The integer argument is taken in the main function and the output file "output.txt" is created again, in main. Additionally the client threads. Are created and joined by the main function.

The ClientThreadFunction initially sleeps for random amount of milliseconds between 50 and 200. Then it creates a system thread funciton. Then chooses a random seat among the ones that are not reserved by any client thread. If the seat was not chosen by another client thread first, system thread will eventually reserve this seat fort he client. Otherwise, the client chooses another random seat.

The SystemThread function initially busy waits until the client manages to choose a valid seat. Then it reserves the seat and exits.

**The Development Platform of the Project and How to Run**

The project was developed on CLion with g++ compiler on a MacOS Mojave 10.14.1. After the project was finished it was run on an Ubuntu-installed machine with command line interface in order to make sure it executes with no problem.

To run the project:

```
g++ -pthread main.cpp -o out  
./out <integer>
```