

Homework Report – ilkergul 26352

In this homework, I tried to be very similar to the sample output. Initially as it is stated in the guideline, I created my matrix as a shared variable, then fill it in main with 0 in each cell of it. Then, since both travel agent will use the same functionality but the output of with respect their thread will be different. I do not want to create two different function. Hence, I tried to be more modular and compact. I created *ReservationSys* function for both threads and with their unique id assigned in main thread and send as a parameter while creating threads. Threads will do their job without any problem but will not use different functions. Hence, I created a compact solution.

Then, I am checking the empty seats both in thread function and main function since thread can work faster than main thread and to be similar to the sample output. After filling the seats. The thread who waits in the loop will continue its function but if both threads work faster than main thread then I can have a problem searching the airplane seats more than once, in which I try to mean after the thread that waits to enter critical region will enter. So we should have 1 search but finding no empty seats. That is very normal. However, if I do not also check emptiness in threads. Before assigning the Boolean from true to false from main a thread can enter the loop again and search the seats unnecessarily. To prevent this, I also checked the emptiness of seats in threads as a backup security to be similar with the last part of the sample output.

In the function, I did not need to use *printf* but it was my preference, it can be used if wanted. I checked the interval of the random assigned number to be used in matrix than I checked whether the assigned slot is taken before or not. If it not taken, then I reserved it with the respected id number of the thread which checks the aforementioned conditions and decrement empty seat value by 1.

Then, I am writing the seats which are taken by who as an output. I have tried to also mention what I did in the code as comments in order to prevent any confusion related to code workflow.

Yours sincerely

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