**Operating system**

**lab**

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Main functions:

1)enter\_station:

-it is a pointer to function that return void , when a thread for train is created it calls this function which guarantee that only one train enters the station

By making only one thread calls the station\_load\_train

2)station\_load\_train:

-when a train arrives to the station it calls this function which declars that a train is in a station by setting the Boolean variable to true and set the avialables seats in train by the count value then unblock all passengers who are blocked waiting for the train to arrive and then the train is waiting in the station until there is no passengers in the station or there is no seats in the train left

3)station\_wait\_train:

-This function is called by the passengers when enters the station and check if there is a train in the station if not the passenger is blocked, if train exists in station then passengers check if there is an available seats in the station if so passenger calls the “station\_board\_train”

4)station\_board\_train:

-When a passenger enters the train and take a seat the number of passengers in the station and number of seats available in the train is decremented by one, until there is no seats available or there is no passengers in the station, then train will leave the station