

Question 3

Firstly, go through the timetable, recording how many trains arrive before midnight and how many trains depart after midnight. And marking them.

Then make a single list to recording the departure times and arrival times, sorting the list in an increasing sequence of departure and arrival times. Notice the departure time after midnight cannot at the beginning of the list, they are considered for the next day, in other words, they are longer than the other, they are most probably in the back of the sequence.

We go through the ordered list, take a counter to record the number of platforms being used currently and record the maximum number. The maximum number is the optimal solution.