1. Finish the in-class activity
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2. EcoLab is a vehicle emission testing service in Sri Lanka. They have decided to use an information management system to streamline their business operations, and you are hired to design and implement this system.

Earlier, a customer can turn up at their testing station at any time to get the emission test done. However, with the new system, a customer has to first open a ticket by using the online portal of the system. A ticket corresponds to the time slot (of 15 mins) the customer selects in the online portal. If the customer does not arrive at the testing station within the first 10 minutes of his allocated time slot, the ticket gets cancelled, and a message is sent to the customer.

If the customer arrives at the testing station on time, emission testing process is started. First a technician checks the engine and starts a service order. Creation of a service order produces an invoice, and the ticket is confirmed. The customer has to pay the amount indicated in the invoice to the cashier, and he receives a printed payment confirmation for the service order. If the customer cannot pay the amount, service order gets cancelled and the ticket is closed by the clerk at the billing counter. When this payment confirmation is presented at the emission testing point, a technician carries out the emission test, and adds the test result to the service order. This information is sent to the emission certificate issuer. When the customer goes to the certificate issuing counter, the certificate is issued if the vehicle passed the emission test. If the vehicle failed the emission test, a failure report is produced for the customer. After issuing either the certificate or failure report, the issuer closes the service order, and the ticket also gets closed.

Develop the event table for this scenario.
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3. Hell Pizza is a small-scale pizza retail shop in Moratuwa. In recent past, Hell Pizza has gained lot of popularity in the Moratuwa area, and now the shop is planning to expand its business to other locations. Moreover, in order to keep up with the competition, Hell Pizza is planning to make it possible for the customers to order their pizza online and get it delivered. You have been hired by Hell Pizza to implement this online order management system. The initial system requirements description they have sent is as follows:

"The main purpose of this new order management system is to make it possible for the customers to order their pizza online. If a customer is not sure about the type of pizza she wants to order, she can view the list of pizza and prices first. A customer can also visit the web site just to view the products. Every five minutes, the system checks whether any new orders have been placed. If there are any new orders, the system notifies the person at the head office responsible for coordinating among the branches for delivery management (delivery manager). The delivery manger goes through the list of orders, and assigns each order to the corresponding Hell Pizza branch, based on the delivery address given by the customer. The system notifies the corresponding branch manager about the orders that have been assigned to his branch. If a branch does not have enough resources to take new orders, the branch manager should indicate this in the system. Before the delivery manager could finish assigning the order to a branch, the system should check whether a branch has set this 'cannot handle new orders' flag. Moreover, the system should not accept any customer orders if all the branches have set their 'cannot handle new orders' flags. Once the order is ready, the branch manager assigns a delivery person for that order, and updates the corresponding order in the system with this information. When the order is delivered, the delivery person records the customer payment in the system."

Develop the event table for this scenario.
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4. FlexiTaxi is a company that runs a taxi service. You are part of the team to design a software
system to automate their operations. FlexiTaxi has sent you the brief description given below
on how the system should operate.
"A customer can book a taxi either through the FlexiTaxi website or the mobile application.
Customer can also contact a customer support executive at FlexiTaxi and get him to place the
booking. Customer can also contact a customer support executive to just to get details such as
taxi rates. Once a taxi booking is made, the system checks the availability of taxis and
drivers, and confirms the booking to the customer. Once the booking is done, a Dispatch
Controller dispatches the taxi at the correct time, and the system notifies the customer about

25 the taxi dispatch. When the customer is picked up, and when the customer is driven to the
26 destination, the taxi driver notifies the system. Once the destination is reached, the driver
27 calculates the taxi fare. The customer pays the driver for the ride and the driver registers this
28 payment in the system. While the customer is being driven to the destination, the system
29 monitors the traffic condition in the route, and calculates the optimal route. This route
30 information is displayed to the driver via a display panel. The government regulates the taxi
31 fares (the amount charged per 1km) in the country, and FlexiTaxi adheres to these
32 government-regulated taxi fares. Whenever the standard taxi fares are modified (e.g. due to
33 the change of fuel prices in the country) by the government, the system should be
34 immediately updated with the new fares."
35 Develop the event table for this scenario.
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38 5. MySpace is a company that operates an online marketplace and hospitality service for people to lease or rent short-term lodging including holiday cottages, apartments, homestays, hostel beds, or hotel rooms.
39 Accommodation owners can advertise their property at MySpace. When advertising, they have to indicate locality, availability period of the accommodation, price range, whether meals are provided, and type of accommodation. Similarly, prospective travellers who are looking for accommodation can search the properties at MySpace using those criteria, plus the star rating value of the accommodation. If an accommodation they like is found, they can book it. Some travellers tend to book their previously visited accommodation without bothering to search for new alternatives.
40 When booked either way, the system has to prompt for information such as dates, number of rooms and number of travellers, before getting the traveller to tentatively confirm the booking. System re-checks the availability of the selected accommodation before tentatively confirming the booking. If tentative booking cannot be confirmed, the user is asked to change the initial details. After this tentative confirmation, if the accommodation provides meals, for each visitor that goes in the booking, their meal preferences have to be registered.
41 Next, the system prompts for credit card details. Once the user provided credit card details are verified, the booking is confirmed. Validation of credit card details is handled by a separate payment gateway. So if the provided payment details are invalid, the system notifies this to the user. User has the option to re-start the booking process.
42 Once a traveller checked out from an accommodation, he can rate his accommodation. Similarly, renters can rate a traveller that stayed at their property. The system daily updates the property ratings. Traveller ratings are updated weekly.
43 Develop the event table for this scenario.