**System Modeling**

- A sequence diagram shows the sequence of interactions that take place during a particular use case or use case instance.

- State chart diagrams focus on the internal state of an object or system and how it responds to external events, while activity diagrams focus on the sequence of activities involved in a process or workflow.

- Construct Use Case Diagram to show the interactions between the user (actors) and the system.

- Construct Class Diagrams to model relationships like Company has booth, or User interact with booth.

- Generalization can be done on the user where both individuals and companies have common attributes like having an account with a username and password that uniquely identifies them, but a company can have a booth while individuals can’t. Also, individuals can interact with booths while companies can’t.

- Aggregation is also done on the entity booth.

-  [Activity diagrams](https://www.visual-paradigm.com/guide/uml-unified-modeling-language/what-is-activity-diagram/) describe activities which involve concurrency and synchronization, which are a variation of state diagrams that focuses on the flow of actions and events. They can be used for:

o To model a human task (a business process, for instance).

o To describe a system function that is represented by a use case.

o In operation specifications, to describe the logic of an operation.

- Activity diagram can be used to model the process of creating an event for example where we need a min num of companies to participate in events to create the event itself and identify the industry that the event will focus on in order to target specific users interested in this industry.