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CSE-B

Assignment No. 05 Unit No. 05 Date : 11/1/22

1) What is interaction? Explain about the interaction diagram?

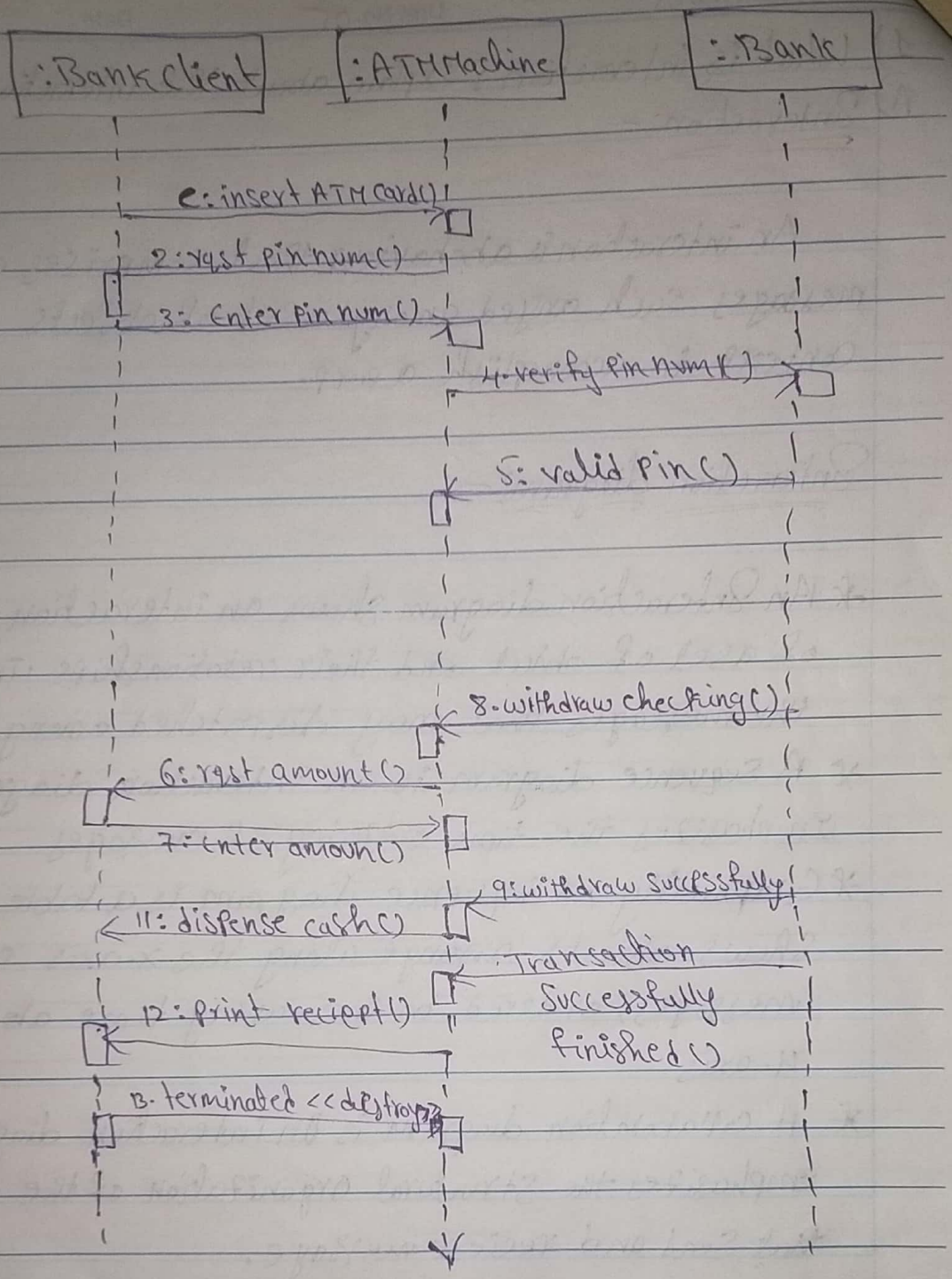
A) Interaction:-

An interaction is a behaviour that comprises a set of messages each anged among a set of objects with ina context to accomplish a purp.

Interaction diagram:-

* An Interaction diagram shows an interaction, consisting of a set of object and their relationships including the messages that may dispatched among them
* A Sequence diagram is an interaction diagram that Emphasizes the time ordering of messages
* Graphically, a Sequence diagram is a table that shows objects arrange along the x-axis and messages, ordered in increasing time along the y-axis
* A collaboration diagram is an interaction diagram that emphasizes the structural organization of the objects that send and reciere message.
* Graphically, a collaboration diagram is a collection of vertices and ares.

Sequence diagram:-



2) Discuss about Events and Sing. Signals in behavioral modeling?

A) Events:-

An Events is the Specification of a Significant occurence that has a location in time and place.

* Anything that happens is modeled as an Event in UML

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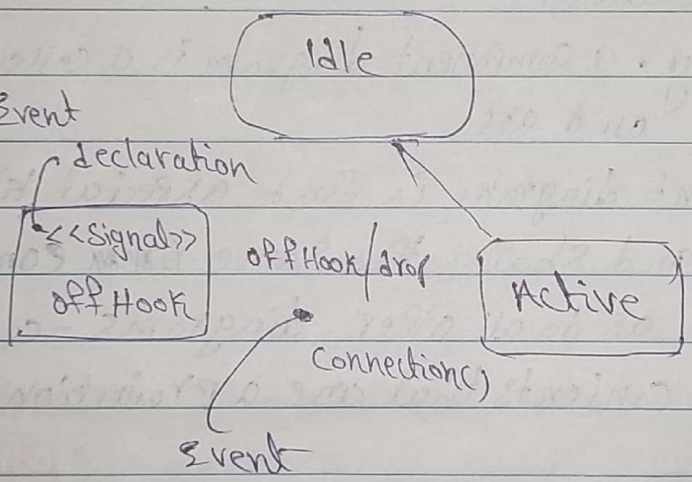
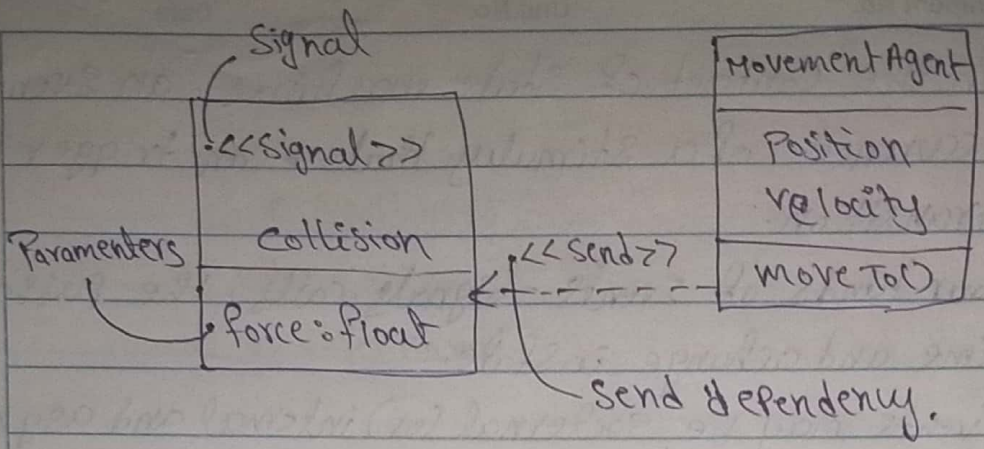
* In the context of state machines, an event is an occurence of a stimulus that can trigger a state transition.
* four kinds of events - signals, calls, the passing of time and a change in state.
* Events may be external (or) internal and asynchronous or synchronous.
* Asynchronous events are events that can happen at arbitary time Eg:- Signal, the passing of time, and a change of state Synchronous events, represents the invocation of an operation Eg:- calls.



Signals:-

* A Signal Event represents a named object that is dispatched asynchronously by one object and then recieved by another exceptions are an example of internal Signal.
* A Signal Event is an asynchronous Event.



3) Explain about the component diagram in Architectural modeling?

A) Component Diagram:-

Terms and Concepts:-

A Component diagram shows a set of components and their relations.

Graphically, a component diagram is a collection of vertices and arcs

A component diagram is just a special kind of diagram and shares the same common Properties as do all other diagrams - a name and graphical contents that are a projection into a model.

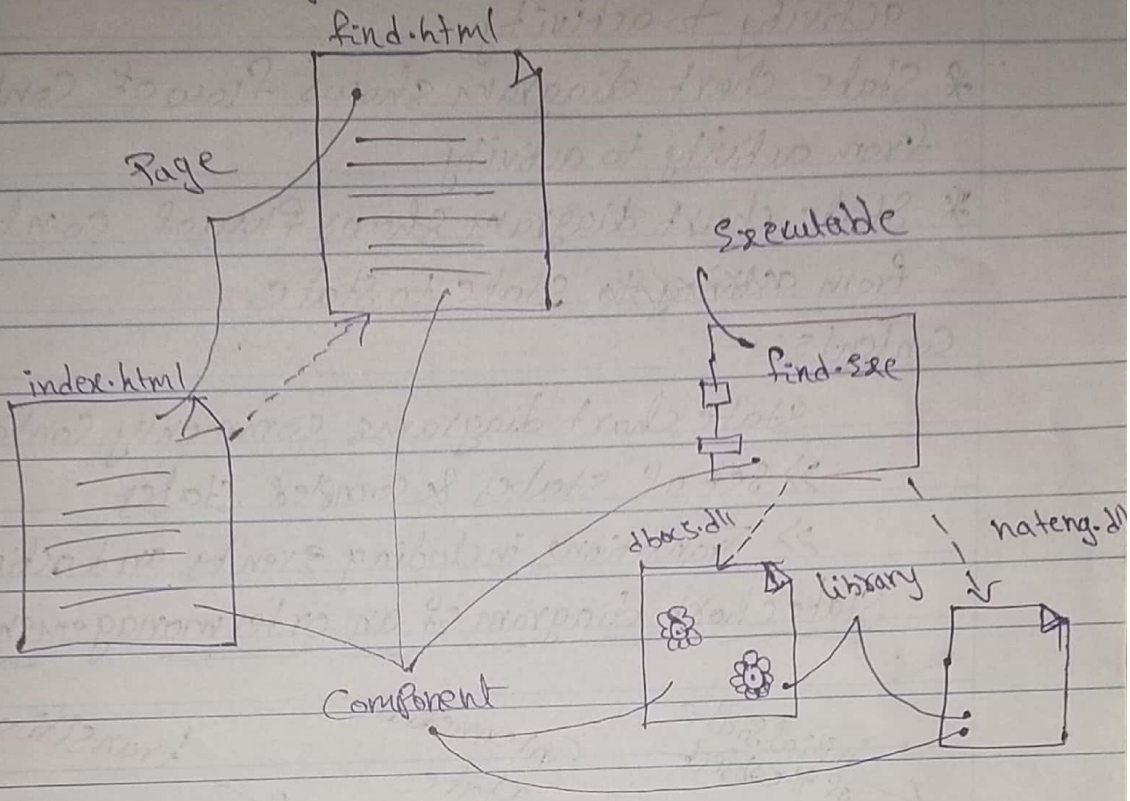
Contents:-

Component diagrams commonly contain
Components
Interfaces
Dependency, generalization, association realization and relationships

Like all other diagrams, component diagrams may contain notes or constraints.

Component diagrams may also contain packages

(or) Sub Systems both of which are used to group elements of your model into larger chunks.



A Component diagram.

4) Discuss about the State diagram in advanced behavioral modeling?

A) State diagram:-

State chart diagrams are one of the five diagrams in the UML for modeling the dynamic aspects of the Systems.

* Statechart diagram shows State machine.
* An activity diagram is a special case of a state chart diagram.
* Both activity and state chart diagram are useful (of a state chart diagram) in modeling the life type

of an object.

* Activity diagram shows flow of control from activity to activity.
* State chart diagram shows flow of control from activity to activity.
* State chart diagram shows flow of control from ~~activity to~~ state to state.

Contents:-

State chart diagrams commonly contain

>> Set of states & complex states

>> Transitions including events and actions.

State chart diagram of an order management System.