What is UML?

->OMG
->Modelling Language
-> Expless & Design Documents, Software

1) UML → Unified Modelling Language
That is adopted by OMG ~~Standards~~

- OMG → Object Management Group
- Based on work from Booch, Rumbaugh, Jacobson

2) UML is a Modelling Language to expless and design documents software

Why Use UML?

- Use for
Any Detail of Design. To Understand Product and Customer/User Communication

- OS → Graphical Notation for → Specifying . Visualizing . Constructing . Documenting
↳ Software Systems .

Static VS Dynamic Design:

- **Static Design:**

  It describes
  - Code Structure
  - Object Relations.

  - Class Relations
  - Objects at Design time
  - Doesn't Change

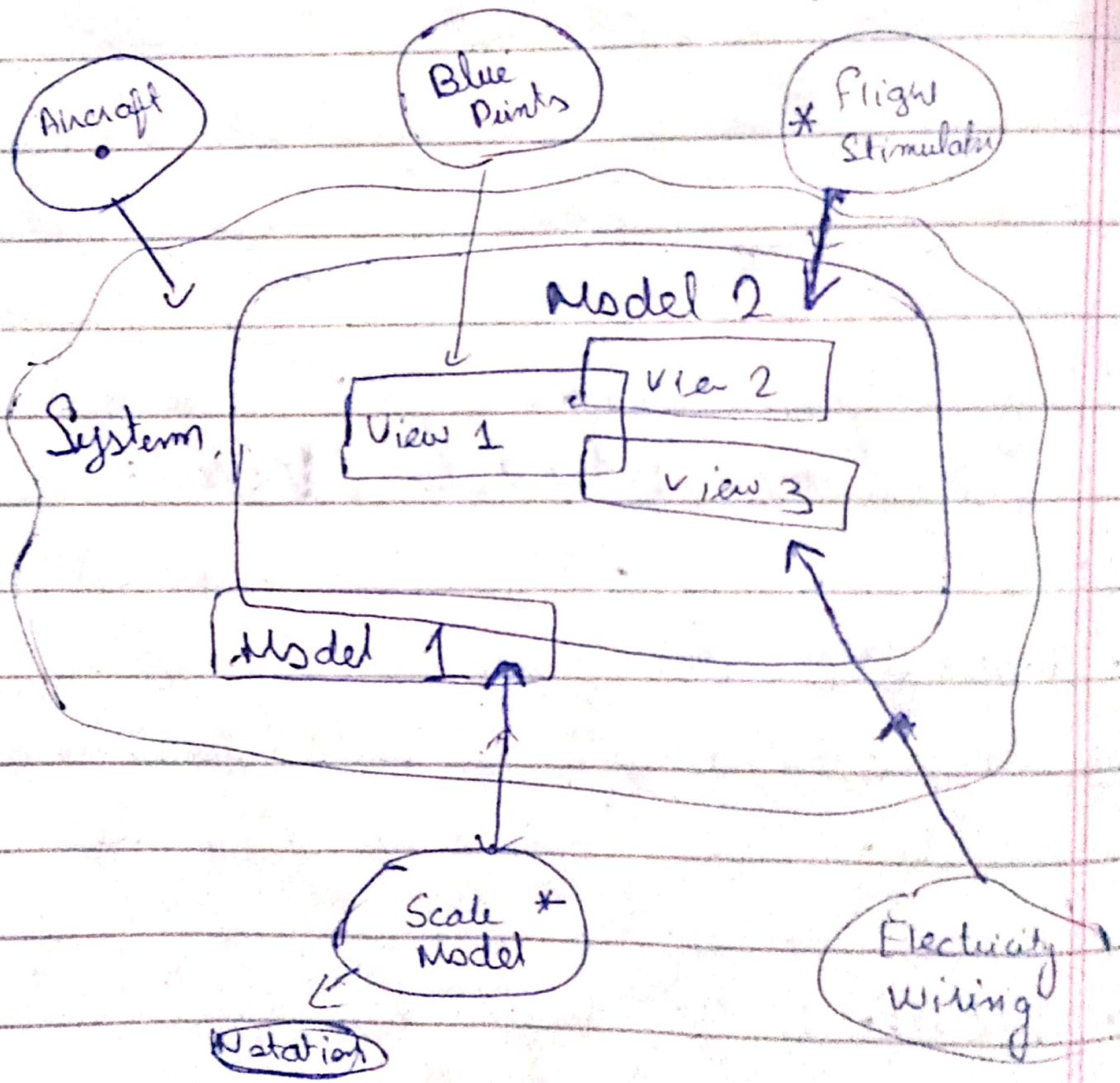
- **Dynamic Design:** (Object Diagrams)

  It shows
  - Communication with Objects

  - Similar to class relations
  - Can follow sequences of events
  - May Change depending upon execution scenario
  - Called Object Diagrams.

Example:

- System : Aircraft
- * Model : • ~~Fig~~ Flight Stimulator • Scale Model
- O Views : • All BluePrints • Electrical Wiring • Fual System



UML Models, Views, Diagram:

ہر Model کا View ہوتا ہے۔ اس View کو Diagram کے ذریعے بتاتے ہیں۔

- UML is a Multi-Diagrammatic Language
- Each Diagram is a View into Model

① Diagram presented from the aspect of Stakeholder

② Provides a Partial Representation ~~of the~~ of the System.

③ Is Semantically (~~same meaning~~ relate) consistent with other Views.

Example:

Use Cases are Useful to...

1) Determing Requirements
2) Communicating with Clients
3) Generating test cases.

Use Case Diagram Summary:

- Use Case Diagram Represent External Behaviors
- Use Case Diagram is useful as an index into the use cases
- Use Case Diagram Provides Meat of Model

Not the use of case Diagrams.

- All use Cases needs to be described
- for the Model to be useful.

Use Case Diagram

- Actors
  - Name
  - Description
- Use Case
  - Name
  - Participating Actors
  - Entry Condition
  - Exit Conditions
  - Event Flow
  - Special Requirements / Exceptional Cases
- Use Case Models
  - Set of all use cases

Relationship (Connections) ⟷
- << extended >> relationships
- << include >> relationships.