

COURSE CONTENT

- δ Overviews
- δ Software Lifecycle
- δ Requirement and Specifications
- δ Design: Architecture and Modularity
- δ Implementation
- δ Testing
- δ Deployment
- δ Conclusion

DESIGN

Software design is the process by which an agent creates a specification of a software artifact intended to accomplish goals, using a set of primitive components and subject to constraints

by Wikipedia

DESIGN

User requirements turn into some kind of suitable form, which can be used in coding, communicating with customers and in other software development activities

MVC

Design and Architecture

SOFTWARE ARCHITECTURE

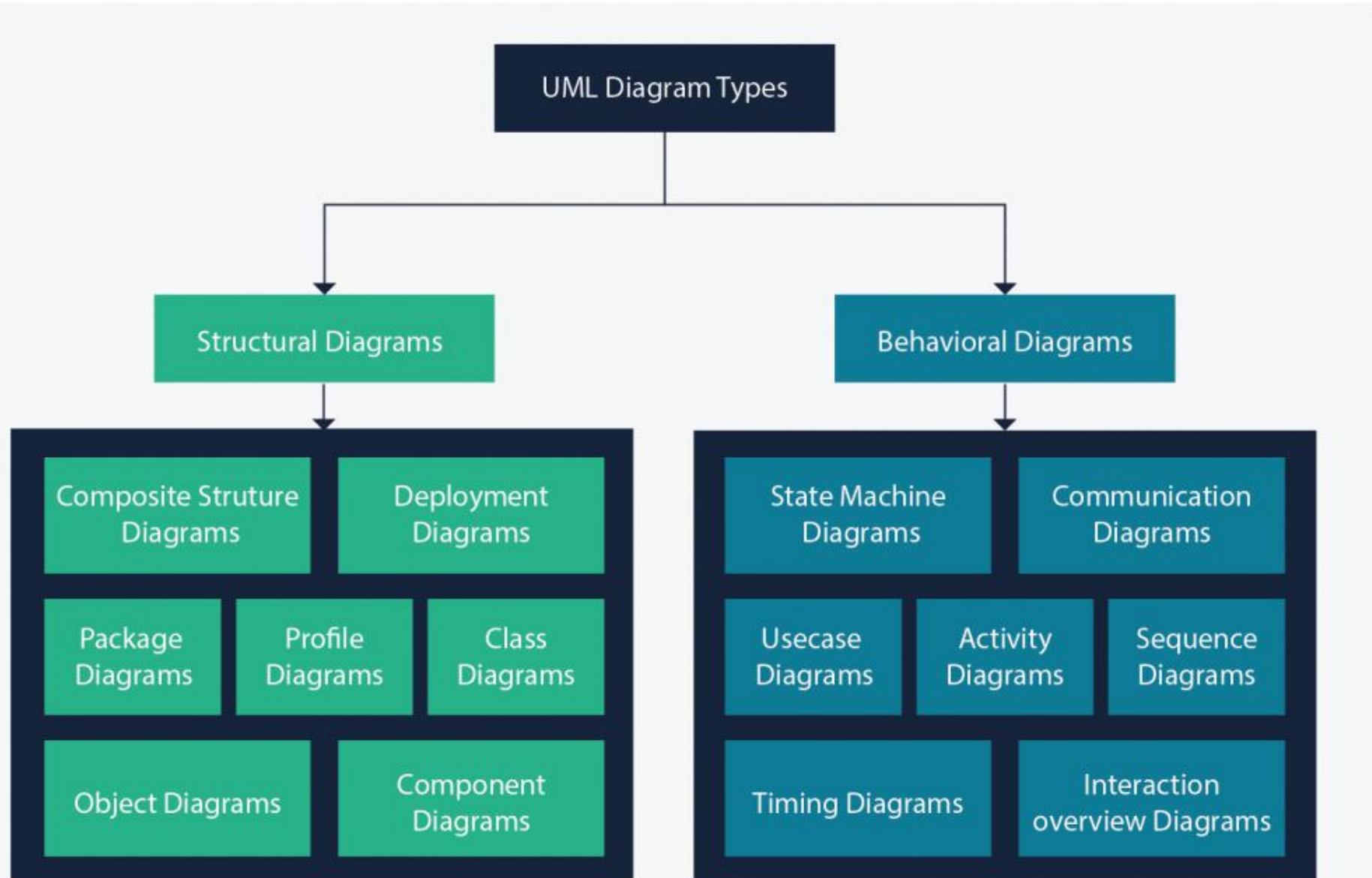
- Highest level of design within a system
- Software architecture is about breaking up larger systems and ideas into smaller focused systems
- Good architecture helps faster developement, fewer bugs, less maintainance, v.v, and it is hard
- The idea of buy or build

UML

(Unified Modeling Language)

It is the general-purpose modeling language used to visualize the system. It is a graphical language that is standard to the software industry for specifying, visualizing, constructing, and documenting the artifacts of the software systems, as well as for business modeling.

UML



UML Class Diagram

- Based on OOP concepts
- Representation
- Name, Attributes, Operations, Modifiers, Relationship

***note:** Class diagrams are one of the most widely used diagrams in the fields of software engineering as well as business modeling.*

TASK

Design a class diagram for an online shop. The diagram should have class for users, products, carts and orders

UML Use case diagram

- Graphic overview of the actors involved in the system
- System boundary
- Different functions by those actors, interactions
- <<extend>> and <<include>>
- Inheritance

***note:** Use case diagram is the most known diagram type of the behavioral UML*

TASK

Try designing an use case diagram for FakeTraveloka. The actors should include customers, travel agents, airline, v.v. You think

UML Sequence diagram

- Objects interact with each other and the order of the interactions.
- Particular scenario
- Actors
- Lifeline
- Message
- Alternative and Option

***note:** It's important to note that sequence diagram show the interactions for a particular scenario*

TASK

Try designing an use case diagram for the scenario of user registration

ABOUT END-TERM PROJECT

- Presentation starts at the week of 9th May
- Project documents
- Final report:
 1. Initial planning
 2. Progress
 3. Outcome
 4. Contribution