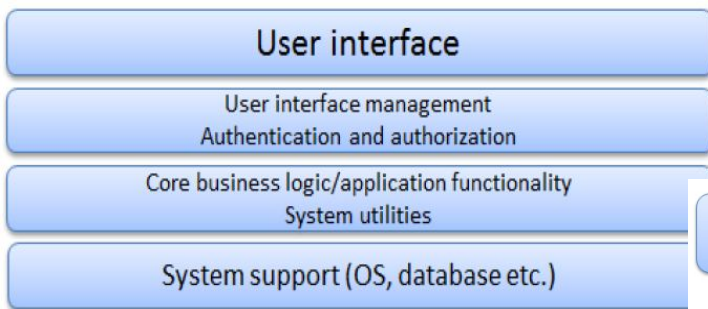Practice 5

ARCHITECTURAL DESIGN

Outline

- 1 Introduction to software engineering (**week 1**)
  - Software engineering (SE) standards
  - What is software project?
  - Problem with software projects. Setting objectives. Stakeholders.
  - Software Engineering Activities
- 2 Software Processes (**week 2)**
  - Software process models
  - Software specification
  - Agile methods
- 3 Requirements engineering (**week 3**)
  - Functional and non-functional requirements
  - The software requirements document
  - Requirements specification
- 4 System and Data Modeling (week 4)
  - Structural models
  - Interaction models
  - Unified modeling process and language
  - Data models
- 5 Architectural Design (**week 5**)
  - Architectural design decisions
  - Architectural views
  - Architectural patterns
- 6-7 UI and Software Design (**week 6-7**)
  - Usability
  - Iterative design
  - Design rules
  - Gestalt laws and Mental models
  - Virtual windows
- 8 MIDTERM. Recall and reflection (**week 8**)

- 9 Software Development (**week 9**)
  - Environment configuration settings
  - Application development
  - Connection with database and data models
  - Development of software application sides
- 10 Software Testing (**week 10**)
  - Verification and Validation.
  - Various types of testing
  - Unit testing
- 11 Software Evolution and Maintenance (**week 11**)
  - Software Development Evolution
  - Software Maintenance
- 12 Software Quality (**week 12**)
  - Design methods of measuring the software. Monitor the quality
  - Use external quality standards
- 13 Risk and Security Engineering (**week 13**)
  - Risk Management
  - Security Engineering
- 14 Team Work and Management (**week 14**)
  - Organizational behavior
  - Select and induct new staff into a project
  - How to Increase staff motivation. Improve group working
  - appropriate leadership styles
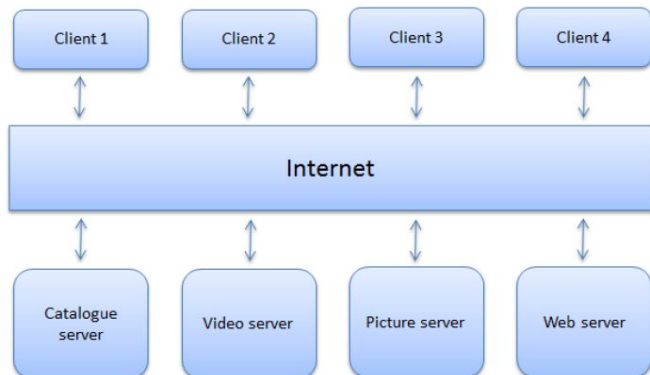- 15 Software Project Presentations (**week 15**)

Class activity. Question 5.1

- *Description:* Please read carefully the description of the relevant Projects for each team. Number of Projects 3, number of teams 3.

- *Class activity Question 5.1 (30 minutes)* : Based on the group discussion please suggest the appropriate model of architectural design that can be more relevant for the proposed Project design.
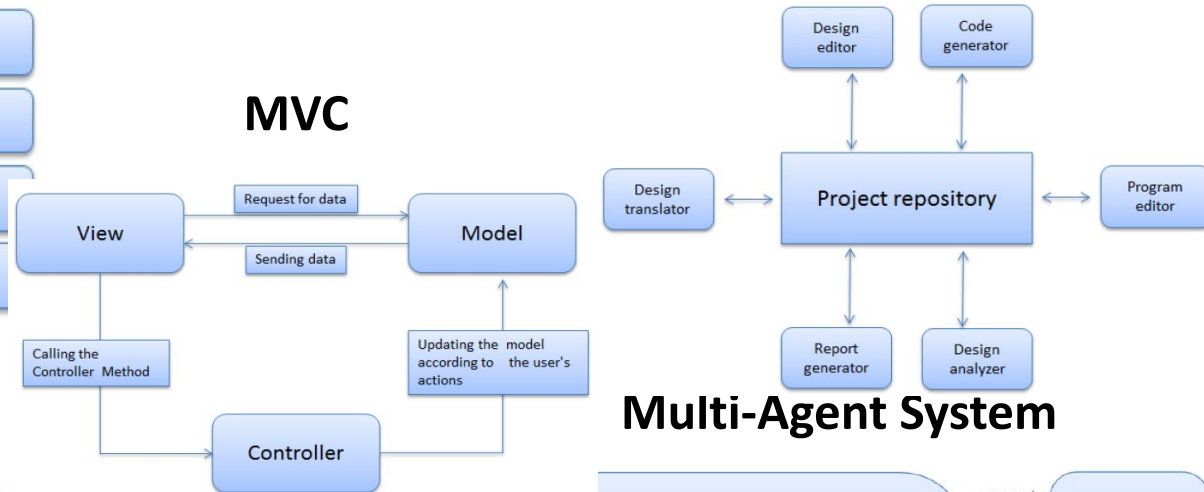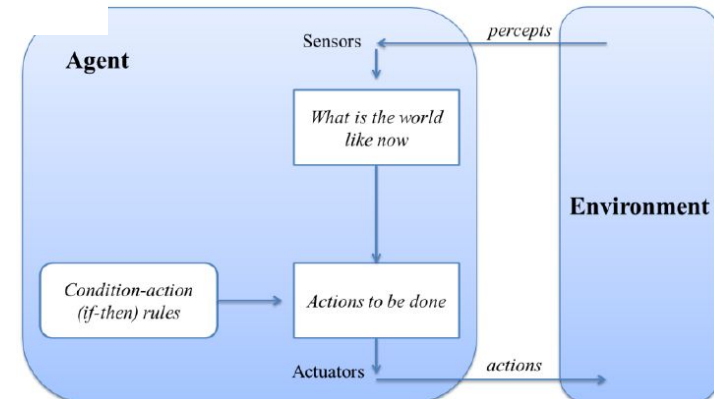
Layered Architecture

MVC

Repository Architecture

Client-Server Architecture

Multi-Agent System

Class activity. Question 5.1 (cont.)

 After class activity discussion please provide the explanation in comments under the appropriate post your selection of the model for architecture design.

Thank you for your kind attention!