

Assignment No. 4

1 TITLE

UML Diagrams

2 AIM

To draw UML diagrams required for project.

3 OBJECTIVE

To model the proposed systems using UML diagrams.

4 THEORY

- What is UML? UML stands for Unified Modelling Language. UML is a standard language for specifying, visualizing, constructing, and documenting the artifacts of software systems. UML is a pictorial language used to make software blueprints. UML is not a programming language but tools can be coded in various languages using UML diagrams.
- Goals of UML: The primary goals in the design of UML are :
 1. Provide users with a ready-to-use, expressive visual modelling language so they can develop exchange meaningful models.
 2. Provide extensibility and specialization mechanisms to extend the core concepts.
 3. Be independent of particular programming languages and development processes.
 4. Provide a formal basis for understanding the modelling language.
 5. Encourage the growth of the OO tools market.

6. Support higher-level development concepts such as collaborations, frameworks, patterns and components.
 7. Integrate best practices.
- Types of UML models: There are three important types of UML diagrams:
 1. Structural Modelling: Structural modelling captures the static features of a system like components used , etc.
They consist of the following:
 - Class diagrams
 - Object diagrams
 - Deployment diagrams
 - Package diagrams
 - Composite structure diagrams
 - Component diagrams
 2. Behavioural Modelling: Behavioural model describes the interaction in the system. It represents the interaction among the structural diagrams. They consist of the following:
 - Activity diagrams
 - Interaction diagrams
 - Use case diagrams
 3. Architectural Modelling: Architecture model represents the overall framework of the system. It contains both structural and behavioural elements of the system. Package diagram comes under architectural modelling.

5 DIAGRAMS FOR THE PROPOSED SYSTEM

5.1 Use case diagram

5.2 Class diagram

5.3 State diagram

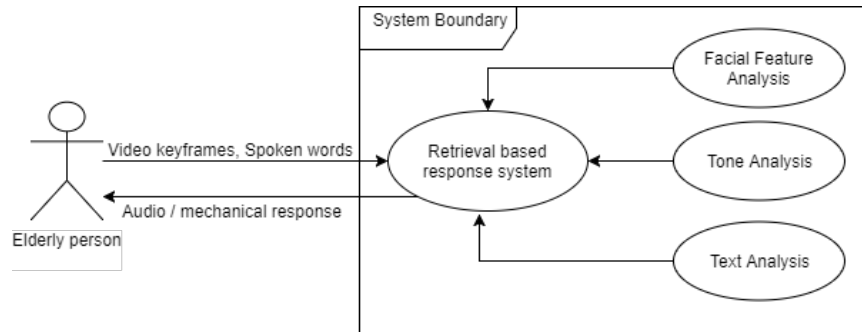


Figure 1: Use case diagram

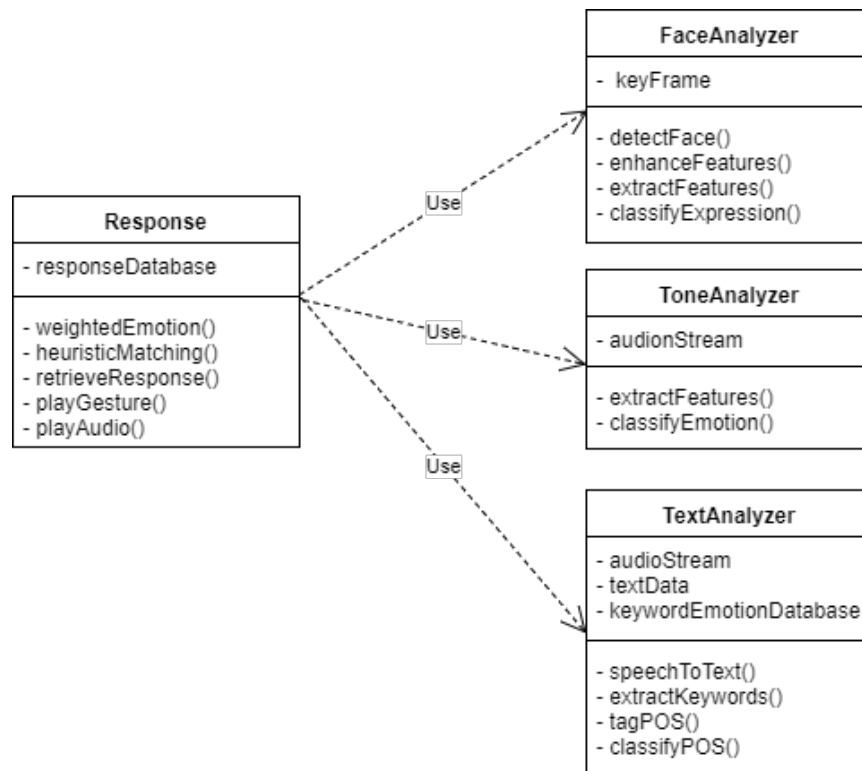


Figure 2: Class diagram

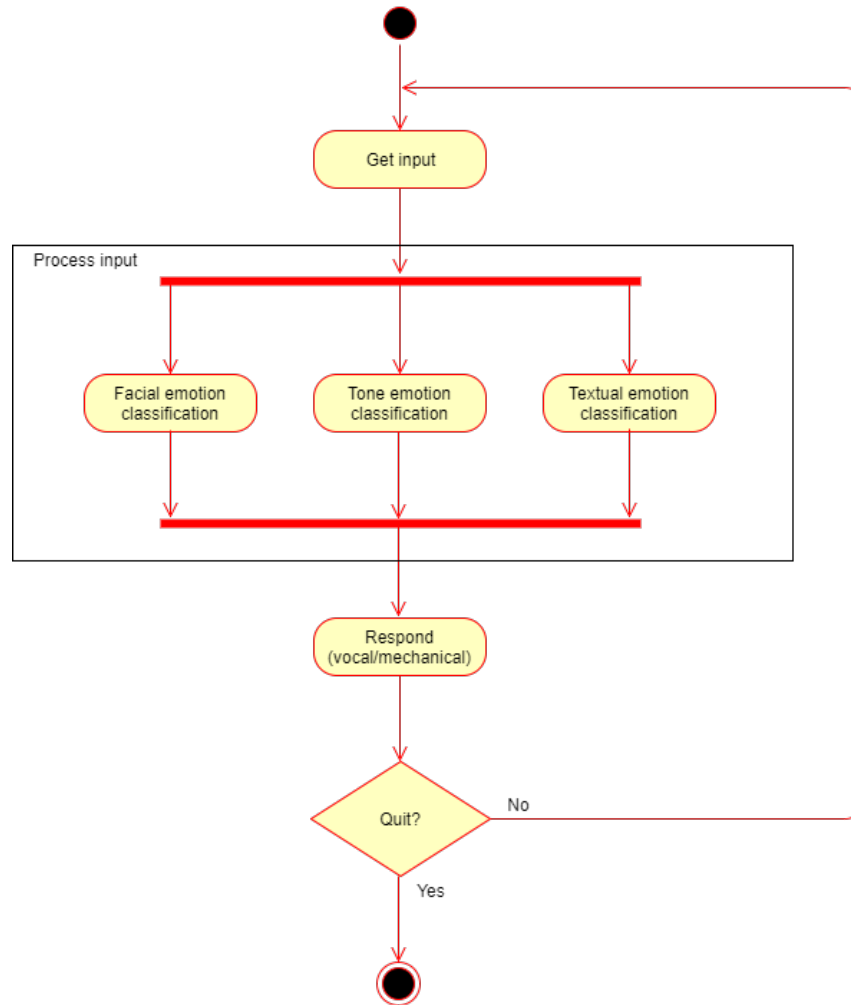


Figure 3: State diagram