**CENG350 Software Engineering, Spring 2022-2023**

**Software Architecture Description (SAD)**

**SAD Outline for afetbilgi.com**

In compliance with ISO/IEC/IEEE 42010; see clause 6 in particular.

For the definitions of the viewpoints to be used, refer to Rozanki & Woods’ ‘A Viewpoint Catalog’, (R&W) highlighted and commented.

Feel free to revise and extend the material that overlaps with your SRS.

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   1. Context View *(R&W chapter 16)*
      1. Stakeholders’ uses of this view
      2. Context Diagram

*Context Diagram should display all external entities that may interact with the system. This section should* ***include Context Diagram and explanations*** *for context diagram.*

* + 1. External Interfaces

*This section should include* ***External Interfaces Class Diagram****. Descriptions of the operations given in the external interface class diagram should also be given.* ***You should aim for 3 external interfaces.***

* + 1. Interaction scenarios

*This section includes* ***2 Activity Diagrams*** *to show interaction sequences taking place over the external interfaces. Choose 2 most complex interactions for activity diagrams. They must be different from those in your SRS document.*

* 1. Functional View *(R&W chapter 17)*
     1. Stakeholders’ uses of this view
     2. Component Diagram

*This section should include* ***Component Diagram and explanations*** *for component diagram. The provides/requires relationship between components must be shown.*

* + 1. Internal Interfaces

*This section should include* ***Internal Interfaces Class Diagram****. Descriptions of the operations given in the internal interface class diagram should also be given.* ***You should aim for 4 internal interfaces.***

* + 1. Interaction Patterns

*This section includes* ***3 Sequence Diagrams*** *to show messaging sequences taking place among the system components over the internal interfaces. Choose 3 most complex interactions for sequence diagrams. They must be different from those in your SRS document.*

* 1. Information View *(R&W chapter 18)*
     1. Stakeholders’ uses of this view
     2. Database Class Diagram   
        ***Database Class Diagram*** *involving the key database or main memory objects. Complete with relevant associations. Descriptions of the non-obvious names (for classes, attributes, operations) should also be given.*
     3. Operations on Data

*Descriptions of the operations given in the database class diagram. These operations may possibly deal with storage and handling of information regarding stores, customers, products and so on.* ***Operations should be listed in a table or using bullets.***

*These are usually CRUD (Create Read Update Delete) operations.*

* 1. Deployment View *(R&W chapter 21)*
     1. Stakeholders’ uses of this view
     2. Deployment Diagram

*This section should include* ***Deployment Diagram and explanations*** *for deployment diagram.*

* 1. Design Rationale

*State* ***one rationale*** *specifically referring to each view presented.*

1. Architectural Views for Suggestions to Improve the Existing System
   1. Context View *(R&W chapter 16)*
      1. Stakeholders’ uses of this view
      2. Context Diagram

***Context Diagram for your suggestions*** *should display all external entities that may interact with the system. This section should* ***include Context Diagram and explanations*** *for context diagram.*

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*This section should include* ***External Interfaces Class Diagram for your suggestions****. Descriptions of the operations given in the external interface class diagram should also be given.* ***You should aim for 2 external interfaces.***

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*This section includes* ***1 Activity Diagram*** *to show interaction sequences taking place over the external interfaces* ***for your suggestions****. Choose the most complex interaction for activity diagram. They must be different from those in your SRS document.*

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