

Team Big Data

U-tification

High Level Design

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Git Repository: <https://github.com/JosephArmas/cecs-491A-Team-Big-Data>

Version History

Current Version: V3

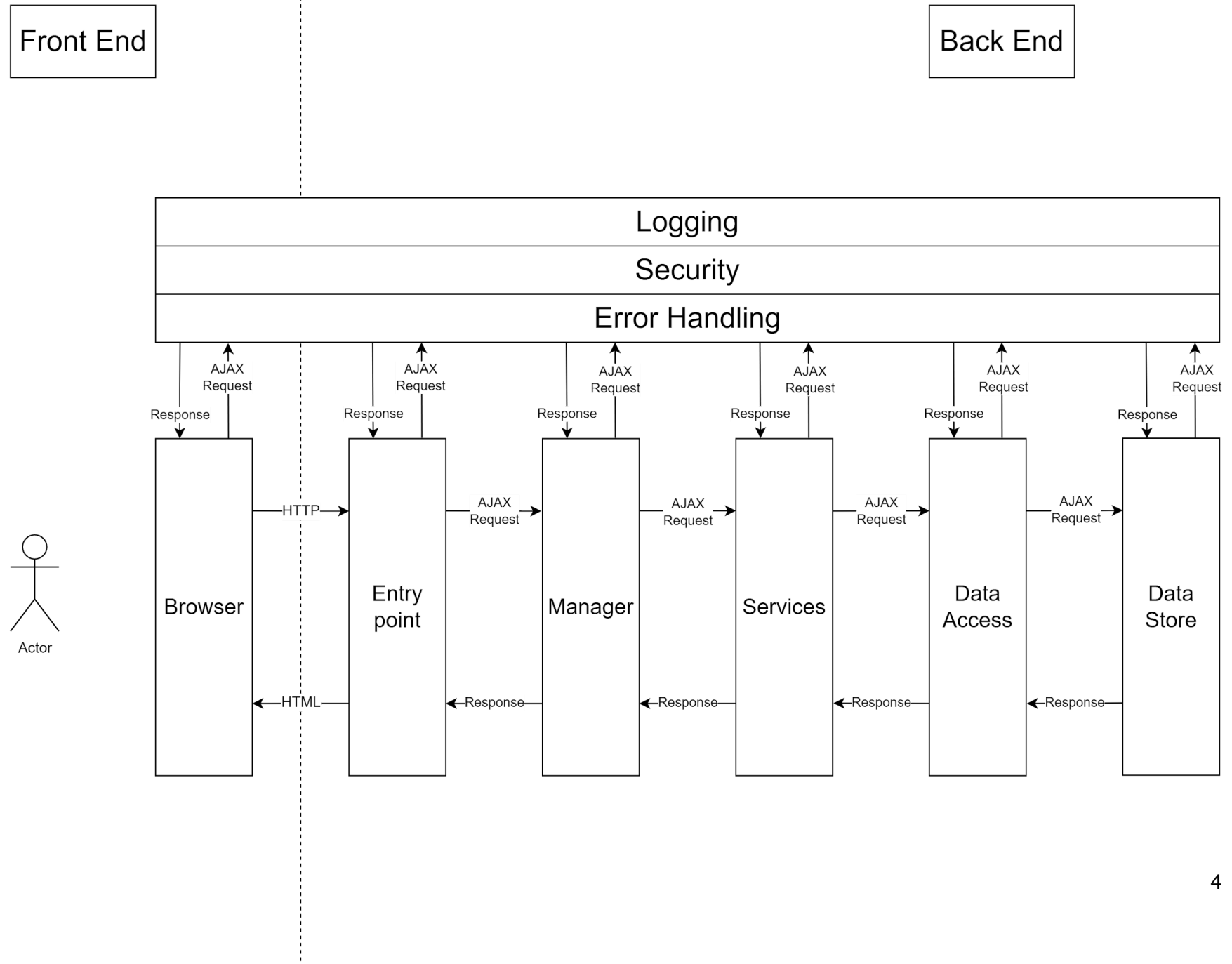
- **CHANGES**
 - Deleted sequence diagram use cases
 - Architect Design
 - User Interface
 - Entry Point
 - Manger
 - Services
 - Data Access
 - Data Store
 - Glossary added
 - Reference added

Previous Versions: V2, V1

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Architecture Design



Message Format

- Message format used will be **REST**
- **JSON** will be returned

Protocol

- Use of **HTTP** protocol

User Interface (browser)

- **Model-View-Viewmodel** design
- **Error Handling:**
 - input validations errors
 - User enters the wrong data types.
 - Display message: “Please try again”
 - Web server unavailable to a user
 - Display message: “Server is currently down come back again later”
 - Web application error
 - Display message: “Browser not supported”
 - Services error
 - Display message: “Service unavailable, try again later”
 - Data access error
 - Display message: “Unable to retrieve data”
 - Data store error
 - Display message: “Failed to store data”
- **Security:**
 - Authenticate user by login
 - User trying to access service without permission
 - Display message: “prompt authorization error”
- **Logging:**
 - Log HTTP errors
 - Log authorization access

Entry Point

- **Error Handling:**
 - Display show blank screen to user
- **Logging:**
 - Log when it failed to initialize

Manager

- **Error handling:**
 - Display message: “failed to fetch service”
- **Logging:**
 - Log fetch services errors

Services

- **Security**
 - Authorization required
 - Admin has read and write permissions
 - User has read permissions
- **Error Handling:**
 - Display message: “Unable to retrieve service at this time, please try again later”
- **Logging:**
 - Logs anything created, updated, and deleted
 - Log errors

Data Access

- **Security:**
 - Requires user authorization
 - Read and write access for admins
 - Read access for user
- **Error Handling:**
 - Data Access becomes unresponsive
- **Logging:**
 - Log errors

Data Store

- **Security:**
 - Authorization and authentication
 - Read and write access for admins
- **Error Handling:**
 - Data store becomes unresponsive
- **Logging:**
 - Log errors and server down
 - Log user inputs

Glossary

REST - Architecture that describes the flow of states to separated components in the system.

[2]

HTTP - Hypertext Transfer Protocol. Allows web services to be distributed to users on a browser. [3]

JSON - An open standard file format that allows human-readable text to become a data object.

[4]

Model-View-Viewmodel - Is a software architectural pattern that facilitates the separation of the development of the graphical user interface. [5]

Reference

- [1] Vatanak Vong. Architecture Design
- [2] “Representational State Transfer.” *Wikipedia*, Wikimedia Foundation, 2 Oct. 2022, \n.en.wikipedia.org/wiki/Representational_state_transfer.
- [3] “Hypertext Transfer Protocol.” *Wikipedia*, Wikimedia Foundation, 22 Sept. 2022, \n.en.wikipedia.org/wiki/Hypertext_Transfer_Protocol.
- [4] “JSON.” *Wikipedia*, Wikimedia Foundation, 27 Sept. 2022, en.wikipedia.org/wiki/JSON.
- [5] “Model–View–Viewmodel.” *Wikipedia*, Wikimedia Foundation, 9 Sept. 2022, \nhttps://en.wikipedia.org/wiki/Model%E2%80%93view%E2%80%93viewmodel.