

Title page

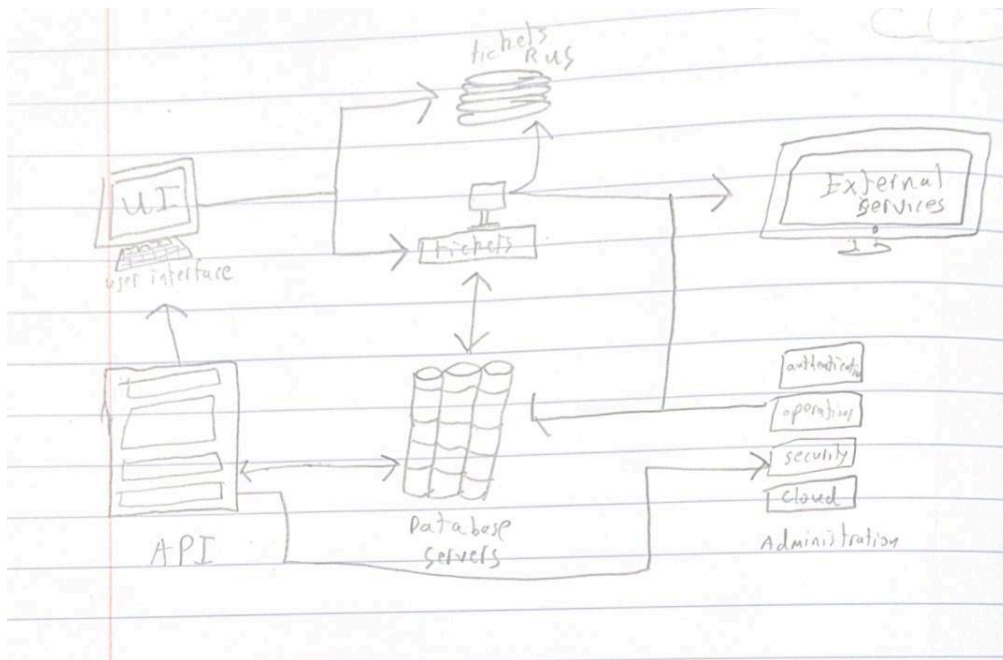
- Software title
- Team members

System Description

- Brief overview of system

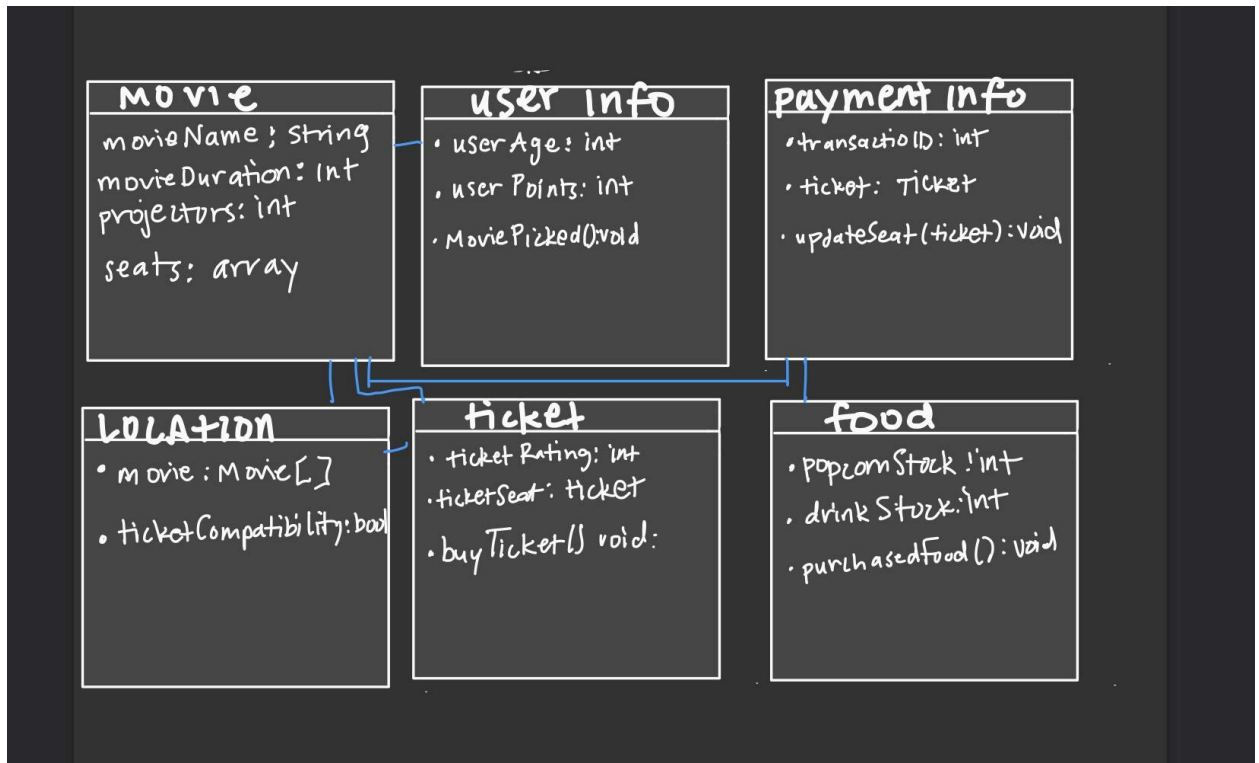
Software Architecture Overview

- Architectural diagram of all major components



- **User Interface:** Represented by icons of a desktop indicating the software is accessible via web and mobile platforms.
- **API Layer:** Shown at the base of the diagram, symbolizing the foundation that handles communication between the user interface and other system components.
- **Tickets Module:** Positioned centrally above the API layer, representing the core functionality of the system where ticket-related operations are processed.
- **Database Servers:** Illustrated with a stack of cylinders, suggesting data storage capabilities, possibly for user data, ticketing information, and performance details.
- **External Services:** Depicted with cloud icons, which indicate integration with third-party services such as payment gateways, email services, or other APIs.
- **Administration:** Represented by a stack, implying tools or dashboards for system administrators to manage and monitor the software's operations.

- UML Class Diagram



- Description of classes

- Movie:
 - The Movie class entails the current film being projected, the duration of the movie, and the projectors displaying the movie. It also has an array of seats available and seats taken.
- UserInfo:
 - The user info monitors the user's age which determines the rating of the movie they can view, and also keeps track of their account's points and the movie they picked as well.
- PaymentInfo:
 - PaymentInfo covers the transaction ID of the ticket purchased, keeping a database of all tickets procured. The paymentinfo class also updates the seat chosen, altering the seating array in the Movie class.
- Location:
 - The location is a simple class, containing the movie and the compatibility of the user's ticket and the location.
- Ticket:
 - Ticket describes the rating of the ticket, such as Rated R or Rated E, and also keeps track of the seat and includes a buyTicket method which is the process of buying a ticket.
- Food:

- Food simply keeps track of the theater's food stock, which when it is low, means that popcorn, hot dogs, and drinks need to be restocked for additional customers who want to purchase food.
- Description of attributes
 - movieName is a string as it just includes the name of the movie, and movie duration + projectors includes the length of the movie and the amount of working projectors in the theater. Seats are ordered in arrays containing individual seats and their availability.
 -
- Description of operations

* descriptions should be detailed and specify data types, function interfaces, parameters, etc..

Development plan and timeline

- Partitioning of tasks
- Team member responsibilities

Just3Guys

Theater Ticketing Software

Software Design Specification

Version 1.0.0

Feb 29, 2024

Group 12

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Prepared for

CS 250- Introduction to Software Systems

Instructor: Gus Hanna, Ph.D.

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Description, development plan, and timeline.

All information present including an overview of the software system, a list of tasks, an estimated timeline to complete the tasks, and which team member(s) is responsible for each task.

Development plan

Project will be divided into modular subsections which will each be completed by their corresponding team.

1.1 Frontend (Samuel Walls)

Front-end development plan from beginning to end.

1.1.1 UI

1.1.1.1 Wide-screen (Desktop)

1.1.1.2 Small-screen (Mobile)

1.1.2 QA

1.2 Backend (Victor Tepordei)

1.2.1 API Server

1.3 Testing system (Matthew Tran)

1.3.1 Unit testing

1.3.2 Integration testing

1.3.3 System testing

1.3.3.1 Alpha

1.3.3.2 Beta

1.3.4 User acceptance testing