UE21CS352B - Object Oriented Analysis & Design using Java

Mini Project Report

"IPL AUCTION SYSTEM"

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Designation

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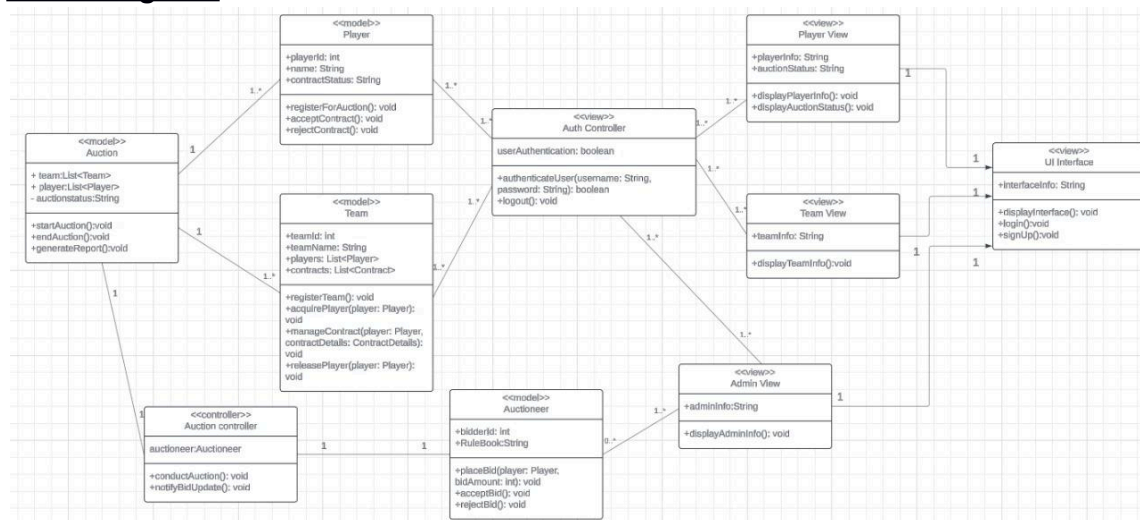FACULTY OF ENGINEERING
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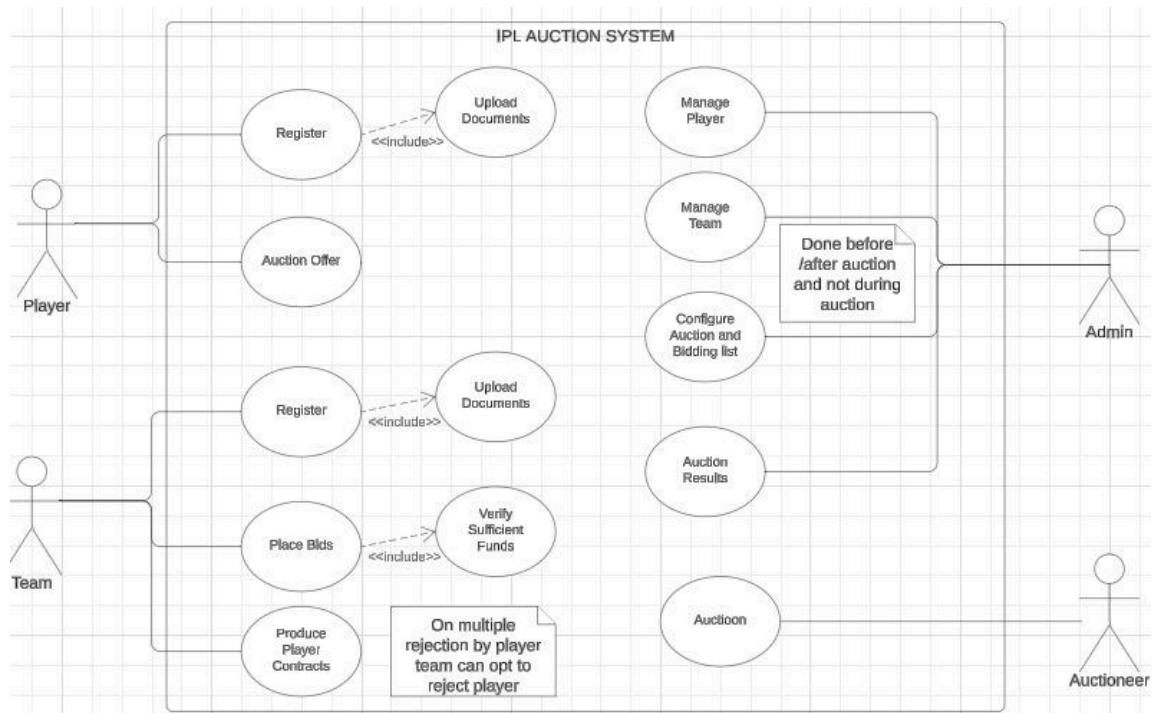
PROBLEM STATEMENT(synopsis)

Design and develop a simplified IPL (Indian Premier League) auction system that facilitates the bidding process for cricket players by franchise teams. The system should allow franchise teams to bid for players in real-time auctions, considering factors such as player skills, performance metrics, team budgets, and bidding strategies. The system should support multiple concurrent auctions for different players and provide real-time updates on bidding progress, highest bids, and auction results. Additionally, it should offer features for managing player profiles, team budgets, auction scheduling, and result tracking. The goal is to create an efficient, scalable, and user-friendly platform that simulates the excitement and competitiveness of IPL player auctions while adhering to industry best practices and design principles.
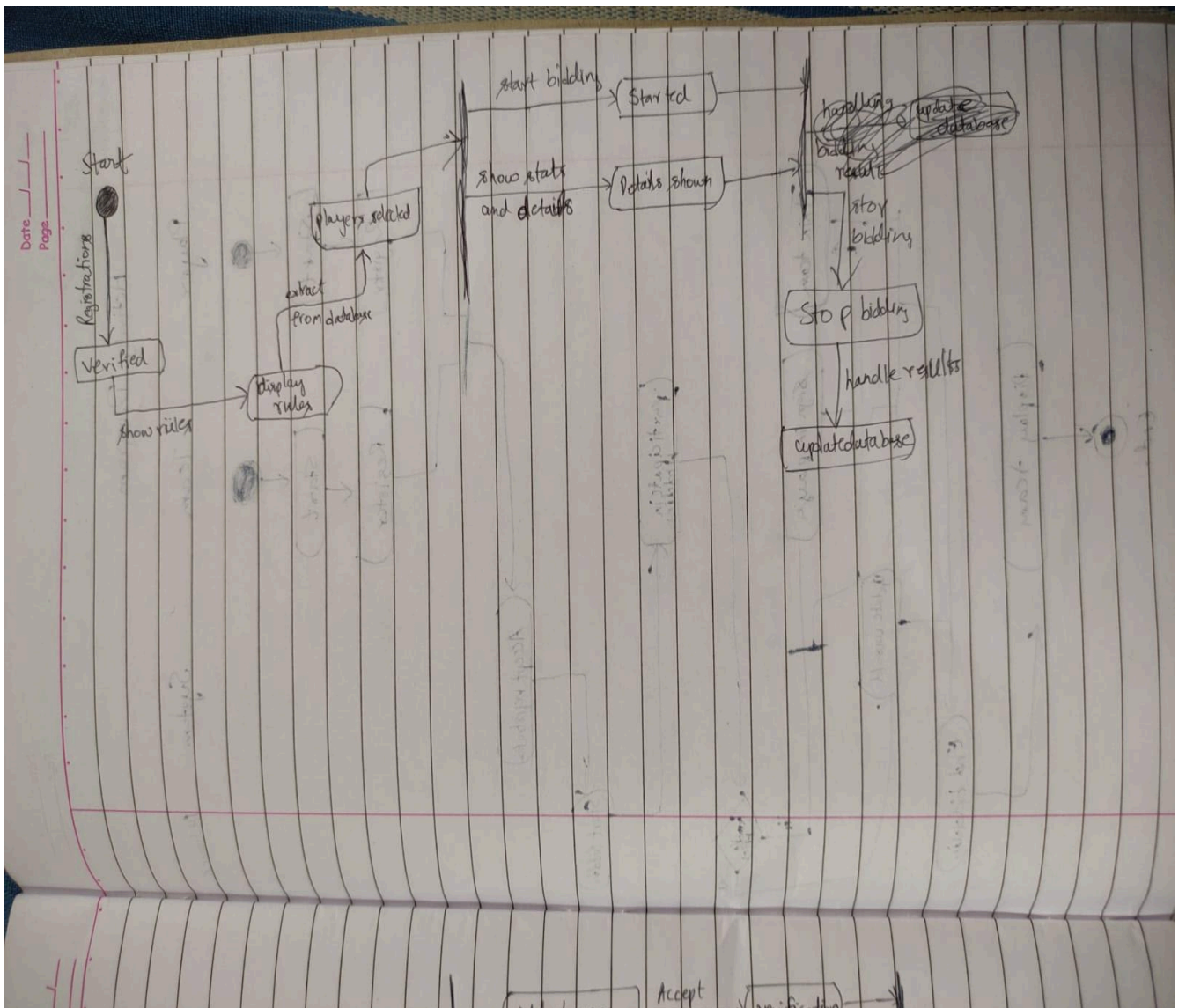
Models (Use Case, Class Models, State & Activity)

Class Diagram:

Use Case Diagram:

IPL AUCTION SYSTEM

Register → (<<include>>) → Upload Documents

Auction Offer

Manage Player

Manage Team

Done before /after auction and not during auction

Configure Auction and Bidding list

Register → (<<include>>) → Upload Documents

Place Bids → (<<include>>) → Verify Sufficient Funds

Auction Results

Produce Player Contracts

On multiple rejection by player team can opt to reject player

Auctioon

Player

Team

Admin

Auctioneer

ACTIVITY DIAGRAM:

Start

Registrations

Verified

Show rules

Display rules

extract
from database

Players selected

start bidding

Started

Show stats
and details

Details shown

handling
bidding
results

update
database

stop
bidding

STOP bidding

Handle results

update database

Accept

Activity Diagram

Player	Team	System	Auctioner

Player: Start → Register

Team: Start → Register

Register → Accept registration

Accept registration → Start Bidding

Start Bidding → participate in bidding

participate in bidding → handle bidding (No / Yes)

Join team, Sign in player

Update unsold

End bidding

Display team → End.

Architecture Patterns, Design Principles, and Design Patterns are used:

In designing an IPL auction system, a combination of architecture patterns, design principles, and design patterns can be employed to ensure a robust, scalable, and maintainable solution. Utilizing a layered architecture, such as Model-View-Controller (MVC), can help separate concerns and enhance modularity. Following SOLID principles aids in creating well-structured and flexible code. For instance, Single Responsibility Principle (SRP) ensures that each class or module has only one reason to change, promoting maintainability. Design patterns like Observer can facilitate real-time updates on bidding, while Strategy can enable various auction strategies to be implemented interchangeably. Employing Factory Method for creating player objects or Abstract Factory for generating different types of bids can enhance extensibility. By incorporating these approaches, the IPL auction system can efficiently handle the complexities of player bidding, provide a seamless user experience, and adapt to evolving requirements with ease.

Github link to the Codebase:https://github.com/LikhithRanga/IPL-Auction-Application

SCREENSHOTS:
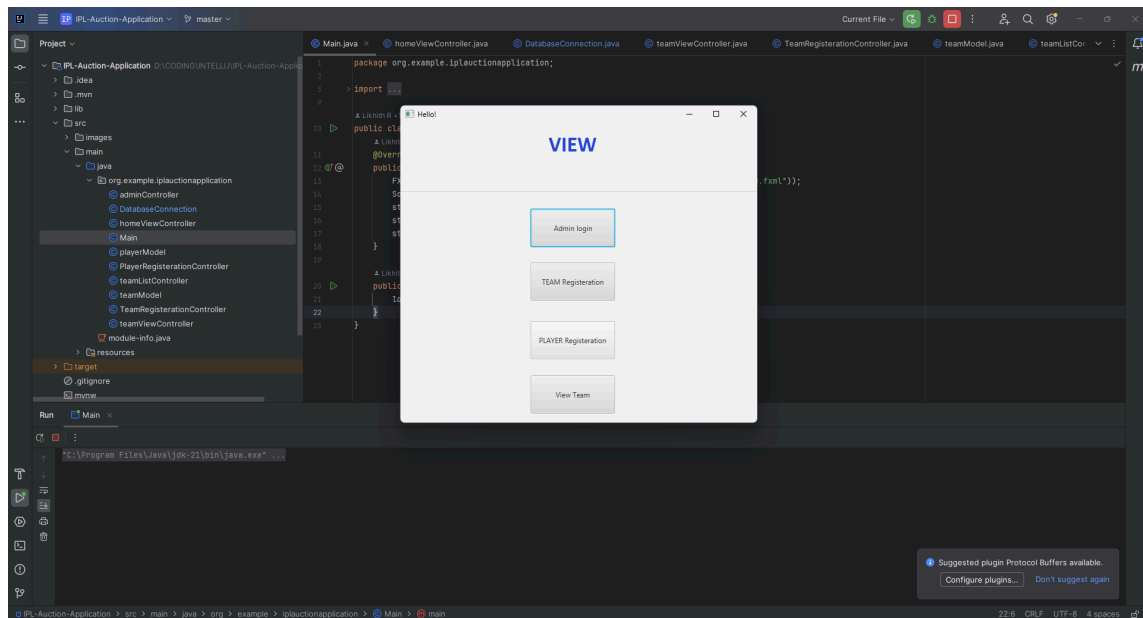
Admin Login

USERNAME: | admin

PASSWORD: | •••••

Start Auction

Back To Home

Team Registeration

Enter Team Detials:-

Team Name : GGG

Team Owner: Likith M C

Register

Back To Home

PLAYER REGISTERATION

Enter the Player Details:-

Player Name : | K L Rahul

Player Age : | 33

Player Role : | WicketKeeper ▼

Set Base Price: | 20000000 ▼

Player Image: | rahul.jpg

Submit

Back To Home

Team List

Enter Team Name

RCB

Enter

Back To Home

RCB

Keshava S H

Lakshmeesh

ABD

Shreyas Iyer

K L Rahul

AUCTION

Start Bid   Next Player   End Auction

Player Role: WicketKeeper

Player Age: 33   **16**

Base Price: 20000000

Current Bid:

55000000

CURENT PLAYER

K L Rahul

Team	Purse Remaining:
RCB	765000000
SRH	957000000
CSK	895500000
GGG	929500000

Team: RCB   Team: SRH   Team: CSK   Team: GGG

Bid   Bid   Bid   Bid

Ignore Player   Ignore Player   Ignore Player   Ignore Player