**Brief Architectural Description**

Problem statement (Version 1.3.3)

XYZ wants to build an online movie ticket booking platform that caters to both B2B (theatre partners) and B2C (end customers) clients.

Key goals it wants accomplished as part of its solution:

• Enable theatre partners to onboard their theatres over this platform and get access to a bigger customer base while going digital.

• Enable end customers to browse the platform to get access to movies across different cities, languages, and genres, as well as book tickets in advance with a seamless experience.

1. Functional features to implement Good to have - Code Implementation (Read scenario)):

Anyone of the following read scenarios: (Only Service Implementation needed/ No UI required)

• Browse theatres currently running the show (movie selected) in the town, including show timing by a chosen date.

• Booking platform offers in selected cities and theatres

o 50% discount on the third ticket

o Tickets booked for the afternoon show get a 20% discount

Anyone of the following write scenarios: Good to have - Code Implementation (write scenario):

• Book movie tickets by selecting a theatre, timing, and preferred seats for the day

• Theatres can create, update, and delete shows for the day.

• Bulk booking and cancellation

Architectural Solution:

1: Description of the technology used in the POC:

* Java 17
* Spring Boot [3.2.5]
* spring-boot-starter-data-jpa for JPA
* Database: MySQL
* Open API for REST documentation
* spring-boot-starter-actuator for health check

2: Brief Description of Application Flow:

The REST Controller is the entry point which receives the request . The REST controller then delegates the request to service layer . The service layer contains the business logic which further delegates the request to DAO layer for DB operations .Spring transaction is used for transaction management.

MYSQL

DAO or Repository

Service

REST CONTROLLER

3: Functionalities covered in POC:

* Onboard partners
* Register theatres in cities
* Create shows
* Delete shows
* Book movie tickets [both single and in bulk] by selecting theatre ,timings.
* Book movie tickets with preferrable seats
* Cancel booking
* Theatres can create, update, and delete shows for the day.
* Perform discount on third ticket or after noon show.
* Browse theatres currently running the show (movie selected) in the town, including show timing by a chosen date.

