**UNIVERSITY OF SCIENCE & TECHNOLOGY OF HANOI** 

**TRƯỜNG ĐẠI HỌC KHOA HỌC & CÔNG NGHỆ HÀ NỘI**

**GROUP PROJECT TOPIC PROPOSAL**

Specialty: ☒ Information and Communication Technology

☐ Cyber Security

Academic year: 2024-2025

**STUDENT INFORMATION**

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| **Topic: Movie and Cinema Management Application** |
| **Description:**   * The **Movie and Cinema Management Application** is designed for both cinema administrators and moviegoers. It offers a comprehensive platform for managing movie details, cinema branches, seat maps, food and drink options, coupons, and news. * **Admin Role**: The admin will have full control over the movie listings, branches, seat maps, coupons, and cinema operations. This includes adding or updating seat types (e.g., VIP, single, double), configuring seating arrangements for each cinema, and managing promotional content like coupons and news. * **User Role**: Regular users will have access to a rich interface where they can browse movies, book tickets, order food and drinks, use coupons, and leave ratings or comments. The ticket reservation system will guide users through seat selection and payment. |
| **Expected outcomes:**   * A **role-based access control system** ensuring admins and users have the appropriate permissions. * **Seamless ticket booking experience** with dynamic seat maps and real-time availability. * **Admin dashboard** for cinema managers to efficiently update schedules, manage branches, food and drink options, and configure seat maps. * **User engagement features:** Users will be able to leave reviews, like movies, and interact with others via comments and replies. |
| **Used Methods and Techniques:**   * **Backend** * **MariaDB** for database management, storing data on movies, branches, seat maps, coupons, and user details. * **JPA/Hibernate** for object-relational mapping (ORM) to manage database interactions efficiently. * **JWT (JSON Web Token)** for secure user authentication, ensuring admins and users have appropriate access to backend resources. * **Spring Boot RESTful APIs** for communication between the backend and the frontend, handling tasks like movie listings, ticket reservations, seat selection, and coupon validation. * **Frontend:** * **Retrofit** for making HTTP requests to the backend API, enabling seamless data retrieval and interaction. * **Dynamic Seat Map Visualizations** for selecting available seats during ticket reservations. * **Payment Integration:** Integration of third-party payment services to handle transactions during the ticket reservation process. |