

Conference Management System

You are asked to develop a system that is designed to facilitate the management of academic, professional, and corporate conferences. It aims to simplify and automate every aspect of conference organization, from initial planning stages through to post-event analysis, addressing the needs of organizers, reviewers, presenters, and participants. Key features and functionalities include:

User Registration and Management: The system supports multiple user roles, including conference administrators, reviewers, authors, presenters, and attendees, with different access rights and functionalities for each role.

Conference Setup and Management: Organizers can set up and customize conference details such as title, description, venue, dates, and schedules.

Call for Papers: Authors can submit papers or abstracts through an online portal, including title, abstract, keywords, and file uploads.

Review and Selection Process: It implements a double-blind review system to ensure unbiased feedback. It facilitates both automatic and manual assignment of papers to reviewers based on their expertise. Reviewers can score submissions and provide feedback or recommendations for acceptance, revision, or rejection.

Program Scheduling: Allows organizers to create sessions based on themes, topics, or types of presentations (e.g., keynote, workshop, poster).

Registration and Payments: Attendees can register for the conference through an online portal.

On-site Management: It utilizes a fast and efficient check-in process using QR codes or NFC technology.

Post-Conference Features: It collects feedback through surveys and offers analytics on various metrics to assess the event's success and guide future improvements.

For the conference management system project, students are required to implement a feature that allows for the submission of papers, which are automatically assigned to a reviewer who will then proceed to review the submitted paper.

Smart On-Street Parking System

You are asked to develop a system that allows drivers to identify, reserve, and pay for parking spaces in urban areas using their smartphones. This solution aims to facilitate the parking process, reduce congestion, and improve the utilization of available parking spaces. Key features and functionalities include:

Registration: The users need to register for the system by entering their personal information (name, phone, email address etc.) and their vehicle information details (license plate number, make, model and color).

Spot Locator: It enables users to find available on-street parking spots in real time through the app.

Navigation to Parking Spot: It provides turn-by-turn navigation to guide the driver to the selected parking spot, considering real-time traffic conditions.

QR Codes: Assigned unique QR codes to each street parking spot can be scanned by a mobile app to identify and confirm the occupancy of a spot.

Payment and Time Limits: It allows users to pay for their parking time based on duration or a flat rate. It also implements dynamic pricing based on demand, time of day, or special events to optimize the use of on-street parking spaces and manage congestion. Users scan the QR code again upon leaving and the system calculates the fee according to the criteria that are mentioned before. Users pay the calculated amount with their credit cards.

Real-Time Space Availability: Scanning the QR code upon leaving updates the system in real-time about the availability of parking spots.

Real-Time Notifications: It notifies users when their parking time is about to expire or if they haven't scanned the QR code upon leaving, reminding them to do so to avoid additional charges.

Enforcement and Compliance: Parking enforcement officers can use a companion app that allows them to quickly check whether a parked vehicle has been registered correctly in the system and whether the parking session has been properly concluded.

Data Analytics: It collects data on parking spot usage, peak times, and occupancy rates to be used by city planners to understand parking behavior and adjust policies or infrastructure accordingly.

For the smart on-street parking system project, students are required to implement a functionality that guides users to their selected parking spot and initiates the parking session through QR code scanning.