

The purpose of this feasibility study is to evaluate the practicality and potential success of the SPOTLOCATOR APPLICATION in addressing parking challenges at Jazan University. It aims to assess the technical, economic, and functional aspects of the project to determine its viability. By analysing the feasibility, this study ensures that the proposed system meets the requirements of users effectively while being realistic and achievable within the given constraints.

## 1. Economic Feasibility

The economic feasibility assesses whether the financial investment in developing the SPOTLOCATOR APPLICATION is justified by its potential benefits:

- **Cost-Benefit Analysis:**
  - **Costs:** The project involves development costs (developer salaries, testing, hosting services, and maintenance), training for users, and marketing expenses.
  - **Benefits:** Enhanced parking efficiency, reduced fuel consumption due to less searching for parking spots, and improved user satisfaction.

- **Return on Investment (ROI):**

By improving parking management, the application can save users time and reduce operational inefficiencies, leading to long-term cost savings for the university.

- **Revenue Streams:**

If desired, the app could integrate features like premium reservations or advertisements, creating opportunities for additional revenue.

- In terms of cost analysis, the newly proposed system necessitates :

Item	Cost
Server(computer with high specifications)	4000 SR
000webhost	200 SR at year
Internet Connection	100 SR Monthly

Table 1: Economic Feasibility

## 2. Technical Feasibility

Particularly in terms of the required hardware, software components and technologies Let's break down the key points mentioned:

Technology Stack:

- Frontend:
  - Dart language
  - Flutter framework
  - pub.dev packages
- Backend (Server-Side):
  - PHP
  - MySQL Server as the backend database
- Development Environment:
  - Android Studio

**We have already studied this technique and PHP is free and open source, MYSQL, Android Studio is available for free, So The project is technically feasible.**

## 3. Operational Feasibility:

- **Phased Deployment:** Start with a limited rollout (one or two parking lots) to minimize disruption and refine the system before expanding campus-wide.
- **User-Friendliness:** The Dart/Flutter interface keeps the learning curve low for students, faculty, and staff.
- **Training Strategy:** Provide short workshops, online tutorials, and help desk support to quickly familiarize users with the app.

- **IT Resource Utilization:** Existing technical staff and infrastructure (PHP/MySQL) are sufficient for server maintenance and routine support, requiring minimal additional staffing.
- **Maintenance & Scalability:** Regular monitoring, timely bug fixes, and the ability to upgrade servers ensure the system can handle increasing usage.
- **Risk & Contingencies:** Manual parking methods can be used if the system goes offline; adherence to university cybersecurity policies safeguards user data.
- **Overall Feasibility:** SpotLocator promises efficient parking management and high user satisfaction with minimal operational disruption.