# Introduction

The **Swinburne Car Park System** is a graphical user interface (GUI) application designed to help users manage staff and visitor parking at a car park.  
The system allows you to add and remove parking slots, park and remove cars, search for cars, and visually monitor the occupancy of all slots using color-coded buttons and tables.

All interactions take place via user-friendly buttons, dialog boxes, and tables.

# Getting Started

**To use the Swinburne Car Park System:**

1. **Launch the Application:**  
   Run the **Application.java** file. The main window will appear.
2. **Interface Overview:**
   * The top area displays the system title and a car icon.
   * The center area is split into two rows for Visitor and Staff parking slots.
   * The bottom area contains all action buttons and a status bar for feedback.

# Main Features & How to Use

* **Add Parking Spot:**  
  Click the **"Add Parking Spot"** button. Enter a slot ID and select slot type (Staff or Visitor) as prompted.  
  The new slot appears in the slot area.
* **Park Car:**  
  Click **"Park Car"**. Enter the slot ID, car registration, owner, and select owner type.  
  The slot turns a different color to show it is occupied and shows a dialog about the car information including time and parking duration.
* **Remove Car:**  
  Click **"Remove Car"** and enter the car’s registration number. The car is removed, and the slot is marked as vacant.
* **Delete Spot:**  
  Click **"Delete Spot"**, enter the slot ID. If the slot is empty, it is removed from the display.
* **Find Car:**  
  Click **"Find Car"** and enter the car’s registration number. The system will show which slot the car is parked in, the owner, and parking duration.
* **Show All Parking Spots:**  
  Click to view a table with all slot information (slot ID, type, status, car registration, owner, parked at and park duration).
* **Clear Screen:**  
  Clears all displayed slots.
* **Exit Application:**  
  Safely closes the program.

# Advanced Features

* **Interactive Slot Buttons:**
  + Left click parks or removes a car.
  + Right click removes the slot if empty.
* **Color Coding:**
  + Staff, Visitor, and Occupied slots use different background colors for easy identification.