

## Phase 6: Lightning Web Components (LWC) for a Modern User Experience

### Objective

The primary goal of this phase was to build a modern, responsive, and efficient user interface using Lightning Web Components (LWC). Unlike older technologies, LWC provides a fast and highly interactive experience for users of the "Make Parking Easier" application.

### Key Development Activity

**1. Parking Availability Component (parkingSlotAvailability)** The core of the custom user interface is the parkingSlotAvailability component. This single, powerful component serves as a real-time, visual dashboard of the entire parking lot.

- **Function:** This LWC calls the ParkingSlotController Apex class to fetch the current status of all Parking Slots. It then displays this data in a user-friendly grid or map format, using different colors or icons to show whether a slot is "Available" or "Occupied".
- **Purpose:** To provide an intuitive, at-a-glance dashboard for both customers looking for a spot and managers overseeing the lot, streamlining the entire parking management process.

The screenshot displays the Salesforce Setup interface. On the left is a navigation menu with categories like 'Flow Category', 'Feature Settings', 'Objects and Fields', 'User Interface', and 'Custom Code'. The main content area is titled 'Apex Classes' and shows details for the 'ParkingSlotController' class. The class is in the 'ParkingSlotController' namespace, created by 'Sarthak Pachpute' on 9/25/2025 at 2:38 AM. It has a status of 'Active' and 0% code coverage. The 'Class Body' tab is selected, showing the following Apex code:

```

1 public with sharing class ParkingSlotController {
2     @AuraEnabled(cacheable=true)
3     public static integer getAvailableSlotCount() {
4         // This SOQL query counts the number of slots where the Status is 'Available'
5         return [SELECT count() FROM Parking_Slot__c WHERE Status__c = 'Available'];
6     }
7 }

```

At the bottom of the browser window, the URL is visible: <https://orgfarm-2c42602007-dev-ed.develop.lightning.force.com/lightning/setup/Skills/home>.

## Conclusion

Phase 6 successfully delivered a modern and dynamic user interface centered around the parkingSlotAvailability Lightning Web Component. This component provides a fast, responsive, and rich user experience for managing and viewing parking information. By connecting the LWC front-end with the Apex back-end, the application is now a powerful and user-friendly tool.