Smart Parking

ANDROID APPLICATION

Introduction

- As population is growing, traffic congestion increases and finding a parking space that too in rush hours becomes difficult for drivers.
- Car parking is becoming major problem with increasing vehicle size and compact parking spaces
- To minimize the traffic congestion and parking problems, Smart parking is an obvious option to get over it.
- It helps to find parking spots in real time by optimizing the parking spots usage with the help of technology.

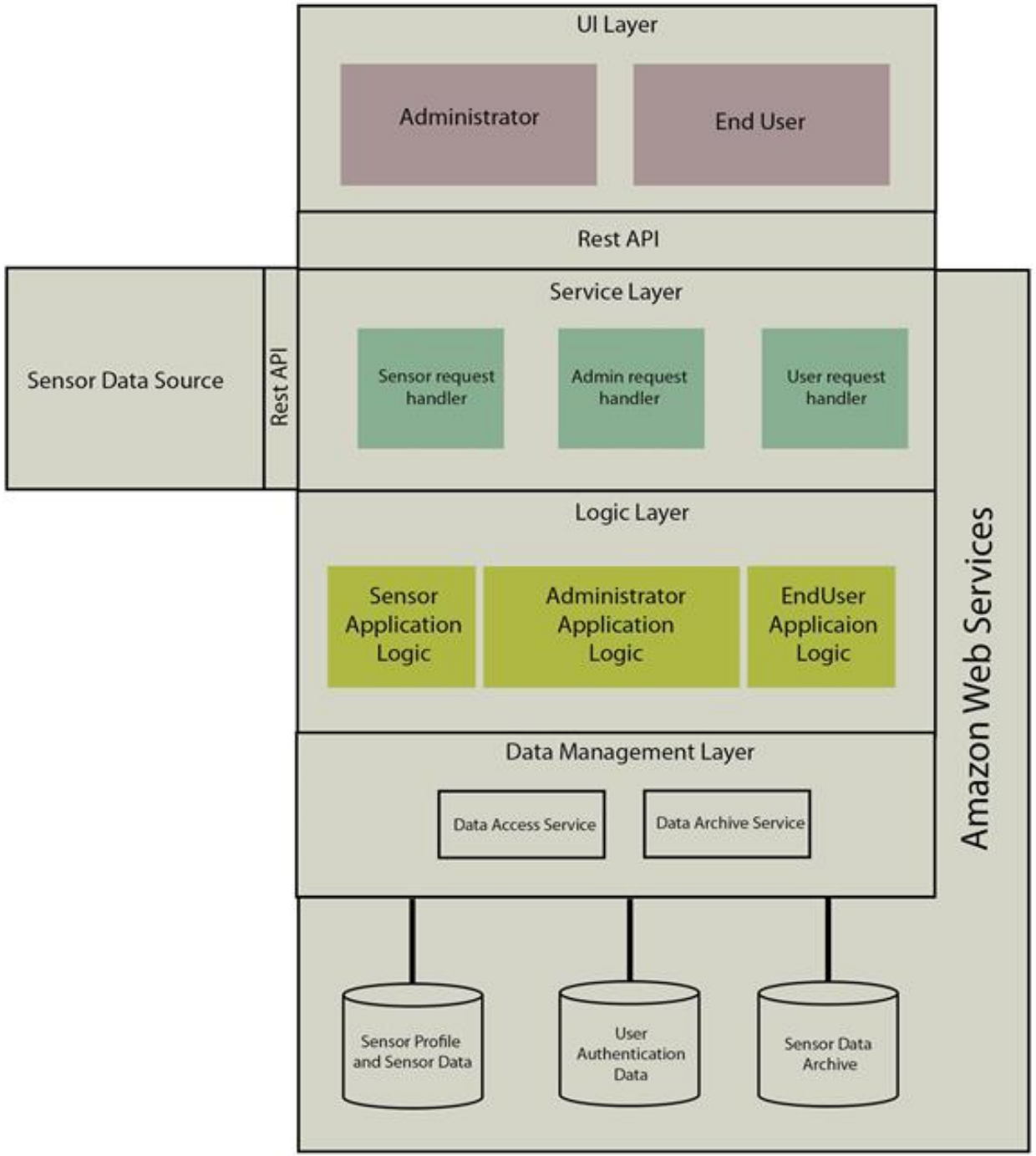
Our Solution

Instead of the actual sensors, we have used a sensor Simulator to mimic the actual sensor behavior

Architecture

- Four Major Layers

  UI Layer
  Service Layer
  Logic Layer
  Data Management Layer



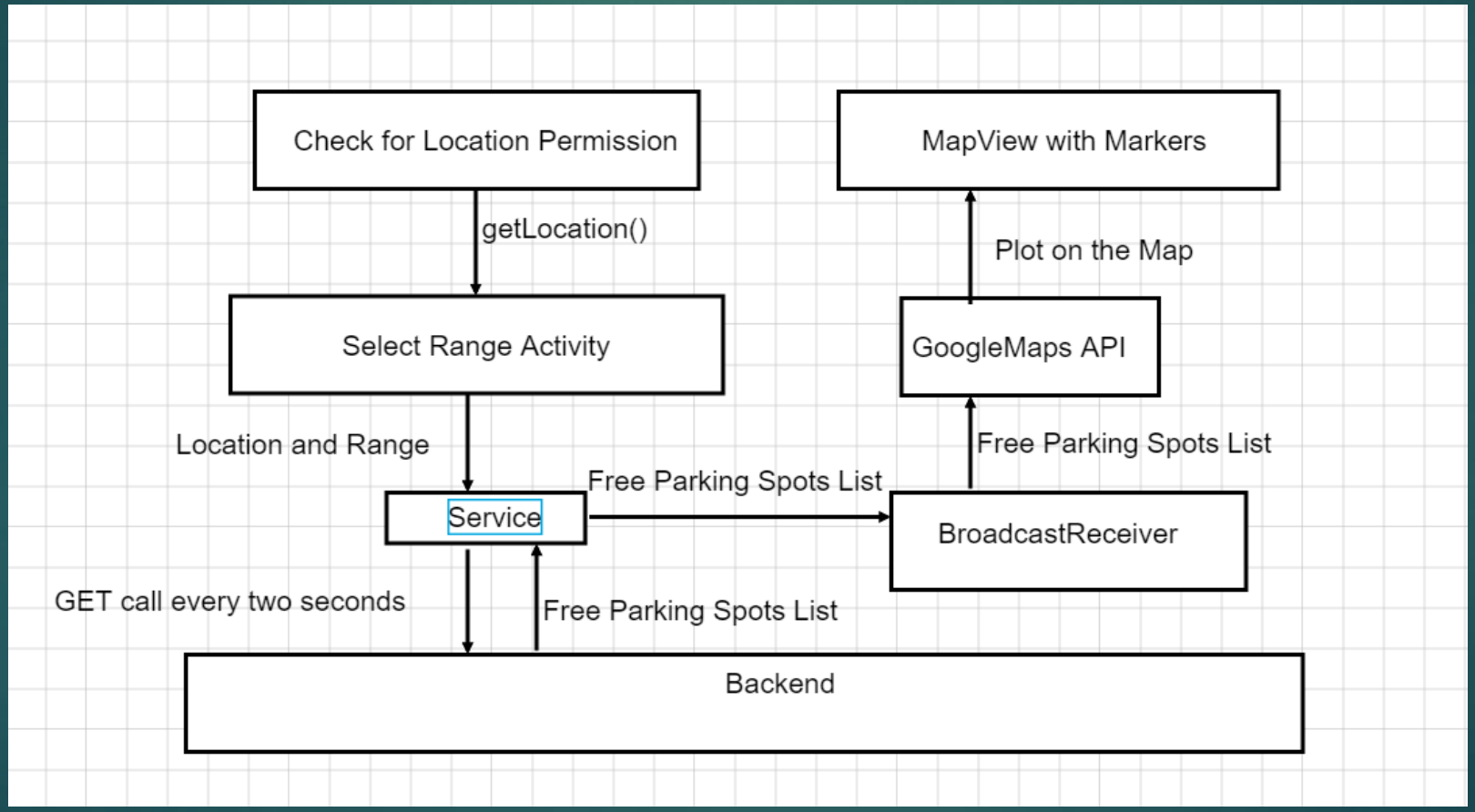
Architecture

- UI Layer:
  Both the android applications are in this layer .
  Communication with the backend using RESTful APIs
- Service Layer:
  RESTful API request Handlers
  Forward request to appropriate application logic
- Logic Layer:
  The core application logic
- Data Management Layer
  Provides interface to access and manage the actual data

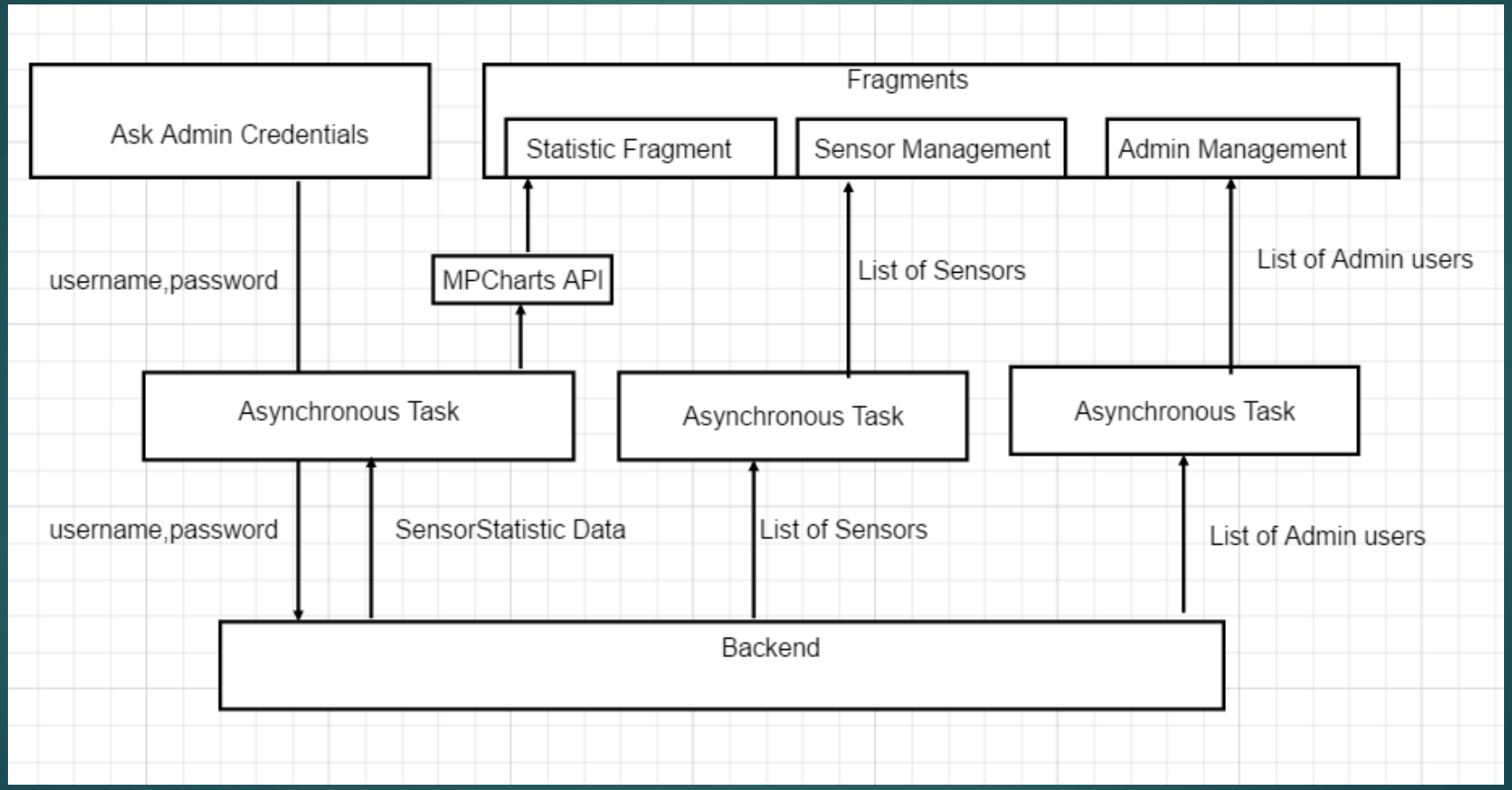
Sensor Simulator

- The sensor simulator tries to mimic the functioning of parking sensors
- Simulator has three major functions:
  Automate the simulation or
  Manually control the simulator
  Log the calls made by the sensor simulator to the cloud

User Application



Administrator Application



Demonstration

Future Scope

- Big Data Analytics on the Sensor Data
- In Application payment System
- Parking Spot Reservation

Thank You!