

## **Title: Ottawa Parking IOS App**

### **1. What the App exactly is?**

This app can help to find parking areas (on-street parking and parking lots) in Ottawa. This app is for IOS. The user can input a destination, then all on-street parking areas and parking lots around the destination within a specified distance will be found and marked on the map. For each on-street parking area or parking lot showed to the user, there is information of it for the user to check. The information includes parking rates, parking duration and some thing about the parking. The user can select one and then use Google map or something like that to navigate to this place. Moreover, users can report incorrect information or supplement parking information by sending messages to a manager, and these information can help refine the app. For the data of parking areas, all data of on-street parking and parking lots will be stored in a database. The app sends a request to a web server, which will retrieve parking data from the database according to the request, and then the retrieved data will be manipulated and returned to the app, which will show all found parking areas on the map.

The pictures below show the on-street parking and parking lots:



on-street parking sign



Parking lots

## 2. Why it is important

It is very convenient if a person finds the parking area in advance. That is, if a person goes to a strange place and he does not find the parking area in advance, it will be very inconvenient when he is arriving there, because it is difficult to find a parking area on himself. Hence, an app which can show the parking areas (on-street parking and parking lots) around a destination is necessary. More importantly, this app can show on-street parking areas, which is exclusive, because there are no apps which show on-street parking areas. However, the number of on-street parking areas is considerable, and parking on the street is very convenient and economical. Therefore, the function

showing on-street parking areas is very practical. In a word, this app can provide a lot of convenience to drivers, so it is important and practical.

### 3. Implementation

1. The IOS app is implemented on Xcode 7.3.1 using programming language Swift.
2. Using PHP scripting language to query data from the database and manipulate the retrieved data. For database and web server, Google Cloud Platform and MySQL are applied.
3. Because the data of on-street parking areas of Ottawa are not available on the Internet, the data are collected in person street by street. And for parking lots, the data are collected online.