Whereabouts Clock

Internet of Things Family Location Clock

Whereabouts Clock Team

Software Developer	Developer Manager	User	Customer
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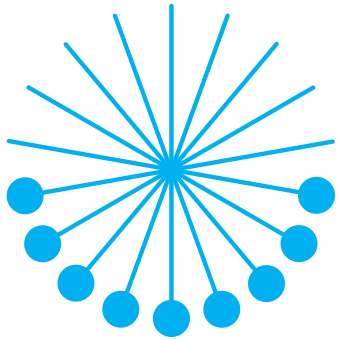


1. Introduction

Harry Potter

Real-Life
Weasley Clock

2. goal

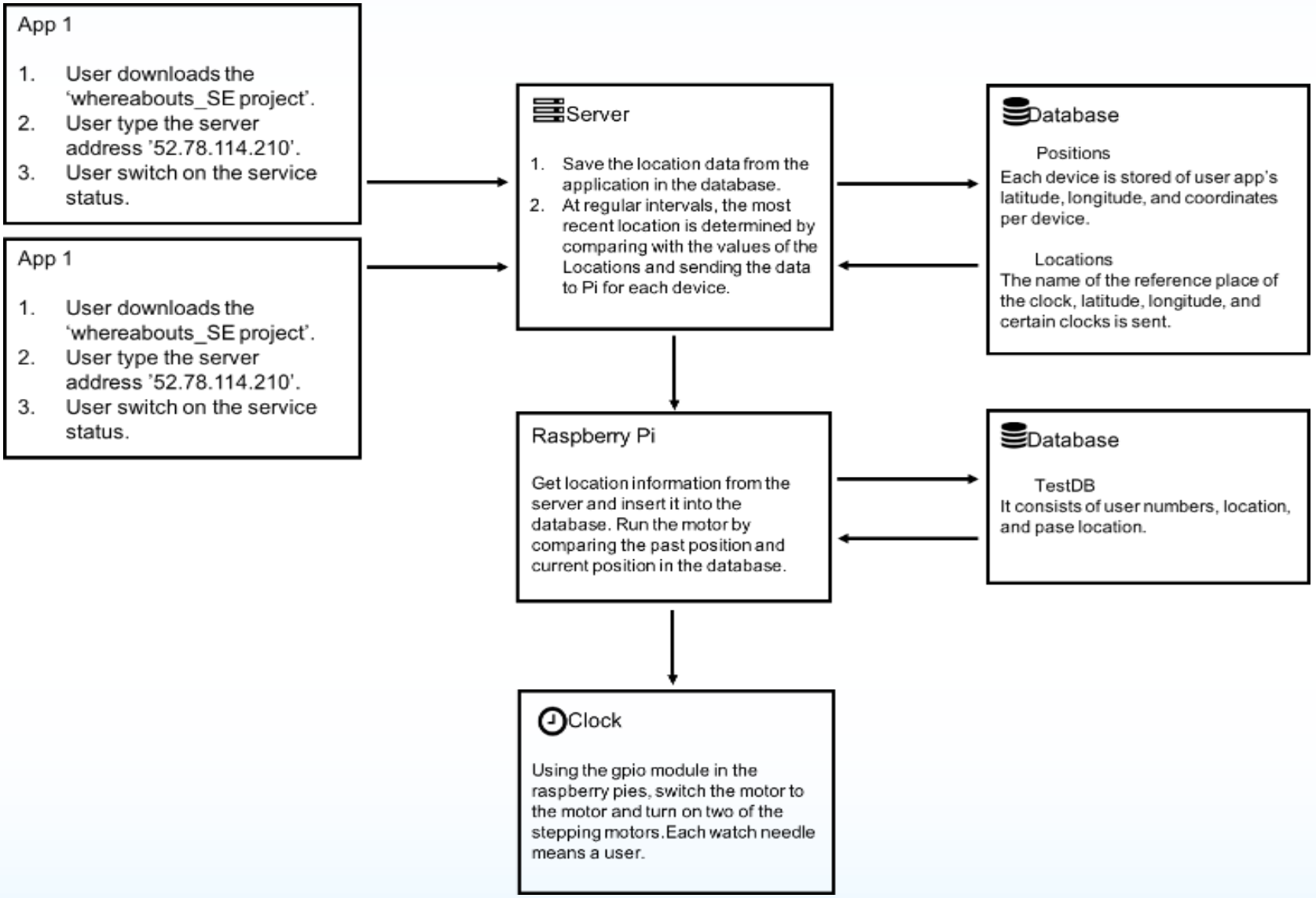
Whereabouts Clock??

Senior

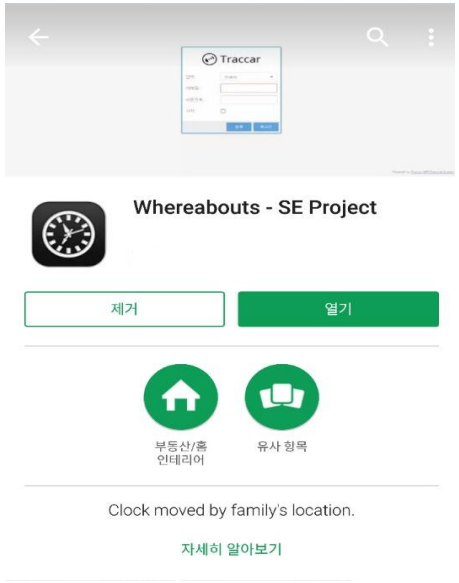
Family

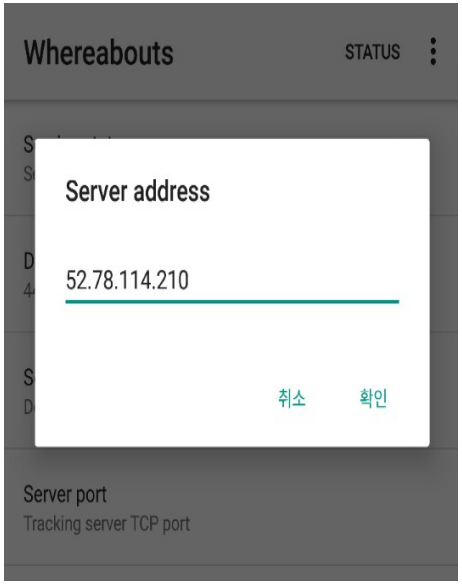
Children

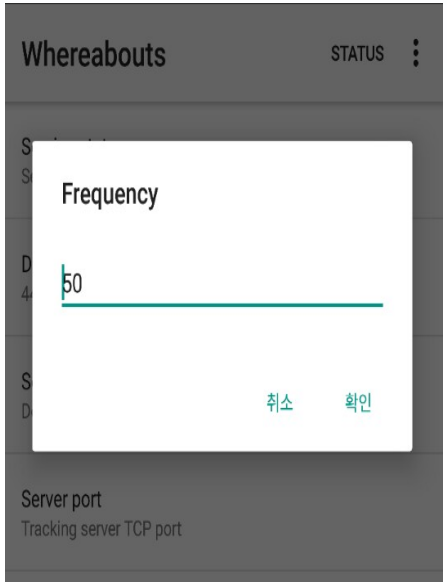
3. Composition - 1

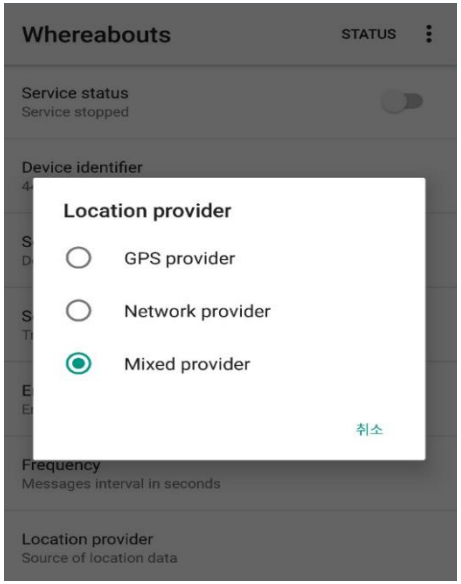


3. Composition – Application









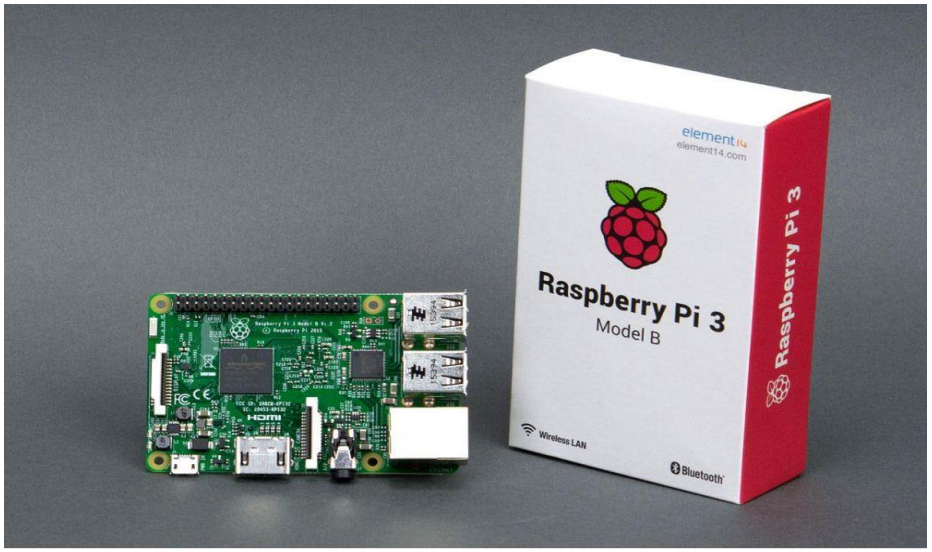
1. Our Whereabouts clocks uses the Traccar Open Source to obtain location information.
2. Put the Amazon EC2 Server Address in the Whereabouts – SE Project App.
3. Set the Frequency that request to the Amazon EC2 Server.
4. Select location provider between GPS mode and Network mode.

3. Composition – Server

Amazon EC2

1. The server stores the location information that the application sends to the Positions DB.
2. The Server sends the real-time location to the Raspberry Pi by comparing the location of the latest location to the Data Set.

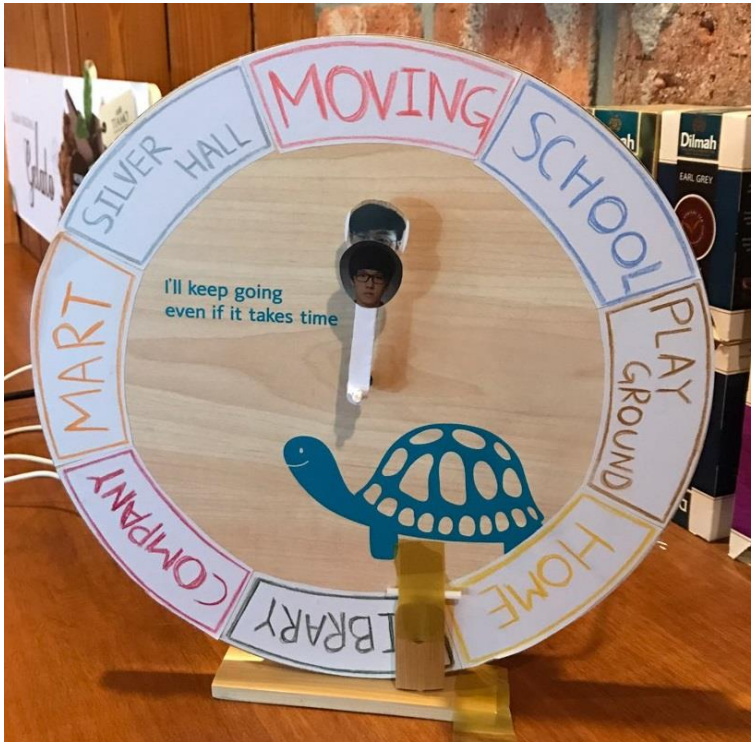
3. Composition — Raspberry pi 3



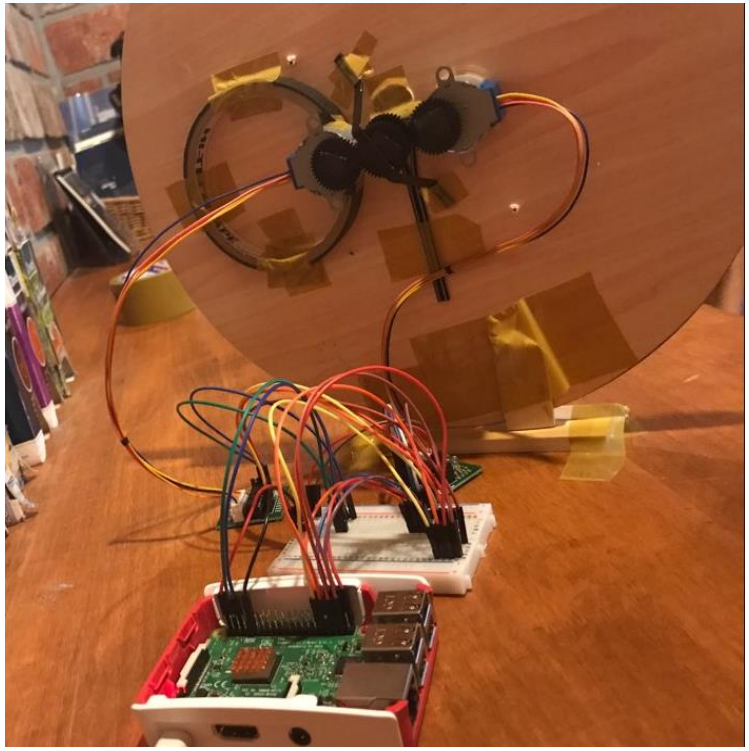
Raspberry pi 3

1. Get location information from the server and insert it into the MYSQL DB.
2. Run the motor by comparing the past location and current position in the MYSQL DB.

3. Composition – Clock



Clock Front

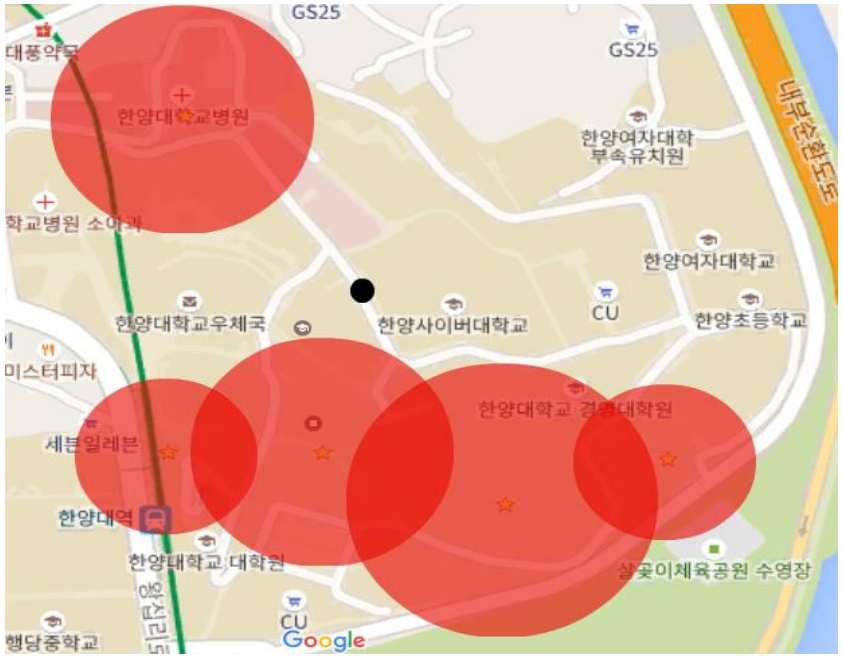


Clock Back

1. The gears of the stepping motor and the gears of the clock turn the our whereabouts clock.
2. Hands of a clock refers to a family member and the clock shows the location instead of the time.

4. Testing Whereabouts Clock

5. Demo Video

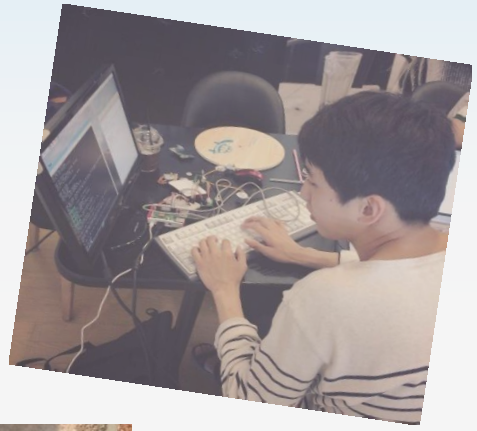


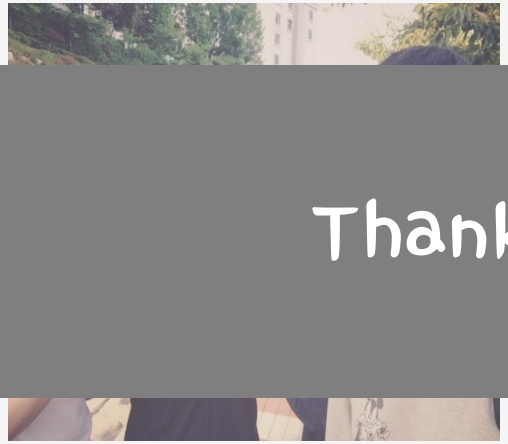
Location in Map

```
mysql> select * from locations;
+-------------+----------+-----------+-------+-------+
| place       | latitude | longitude | scope | clock |
+-------------+----------+-----------+-------+-------+
| School      | 37.555881 | 127.049442 |    50 |     1 |
| Playground  | 37.555408 | 127.047602 |   100 |     1 |
| Home        | 37.555948 | 127.045552 |   100 |     1 |
| Library     | 37.556363 | 127.048323 |    50 |     1 |
| Company     |  37.56517 | 127.007243 |    50 |     1 |
| Mart        | 37.564551 | 127.006342 |   100 |     1 |
| Silver_Hall | 37.555944 | 127.043804 |    75 |     1 |
+-------------+----------+-----------+-------+-------+
7 rows in set (0.00 sec)
```

Location in Database

Q & A





Thank you