

Florida Institute of Technology

Scholarship Repository @ Florida Tech

Computer Engineering and Sciences Student
Publications

Department of Computer Engineering and
Sciences

2015

Trolley Monitoring System

Joshua Adadevoh

Emeka Umeh

Stephanie Richard-Obire

Follow this and additional works at: https://repository.fit.edu/ces_student

Trolley Monitoring System

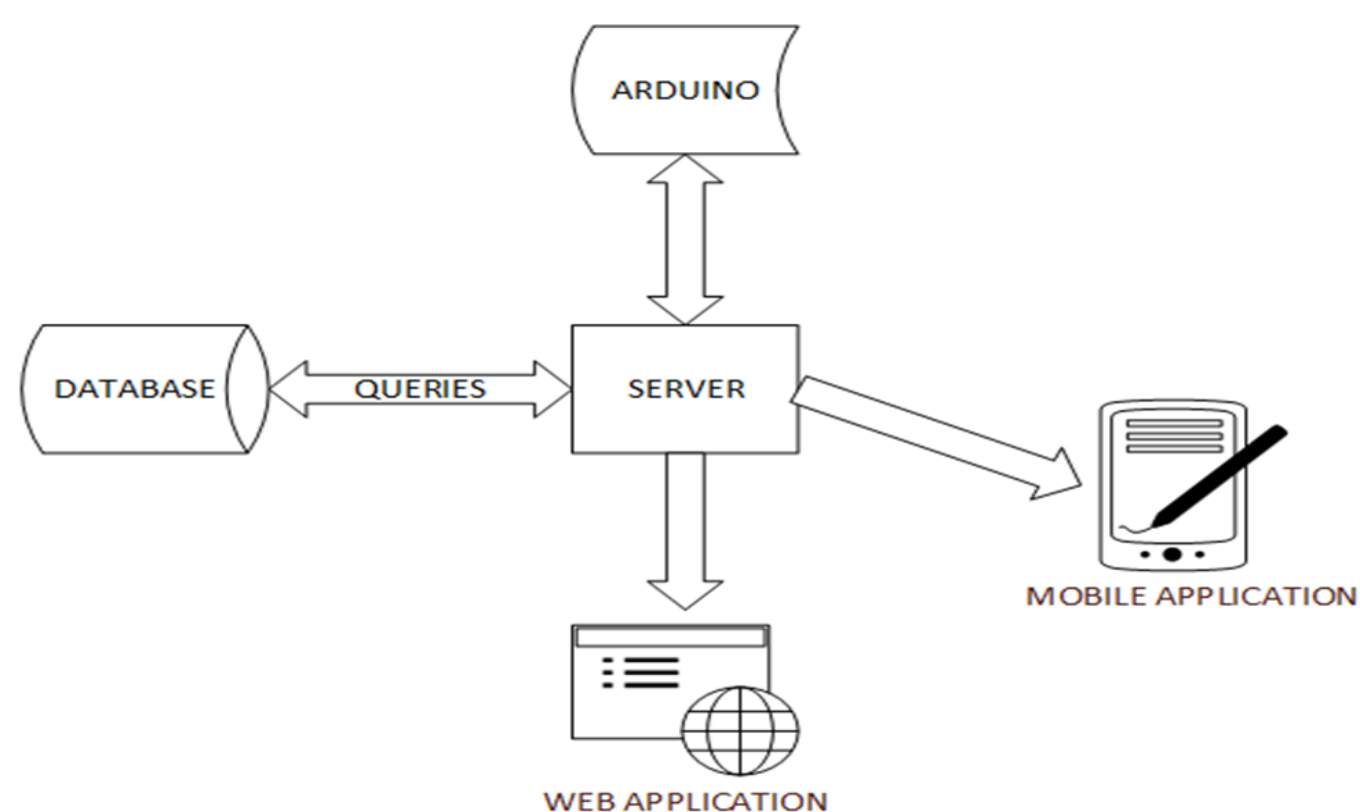
Joshua Adadevoh, Emeka Umeh, Stephanie Richard-Obire

Faculty Advisor: Carlos E. Otero, Ph.D, Dept of Electrical and Computer Engineering, Florida Institute of Technology

Overview

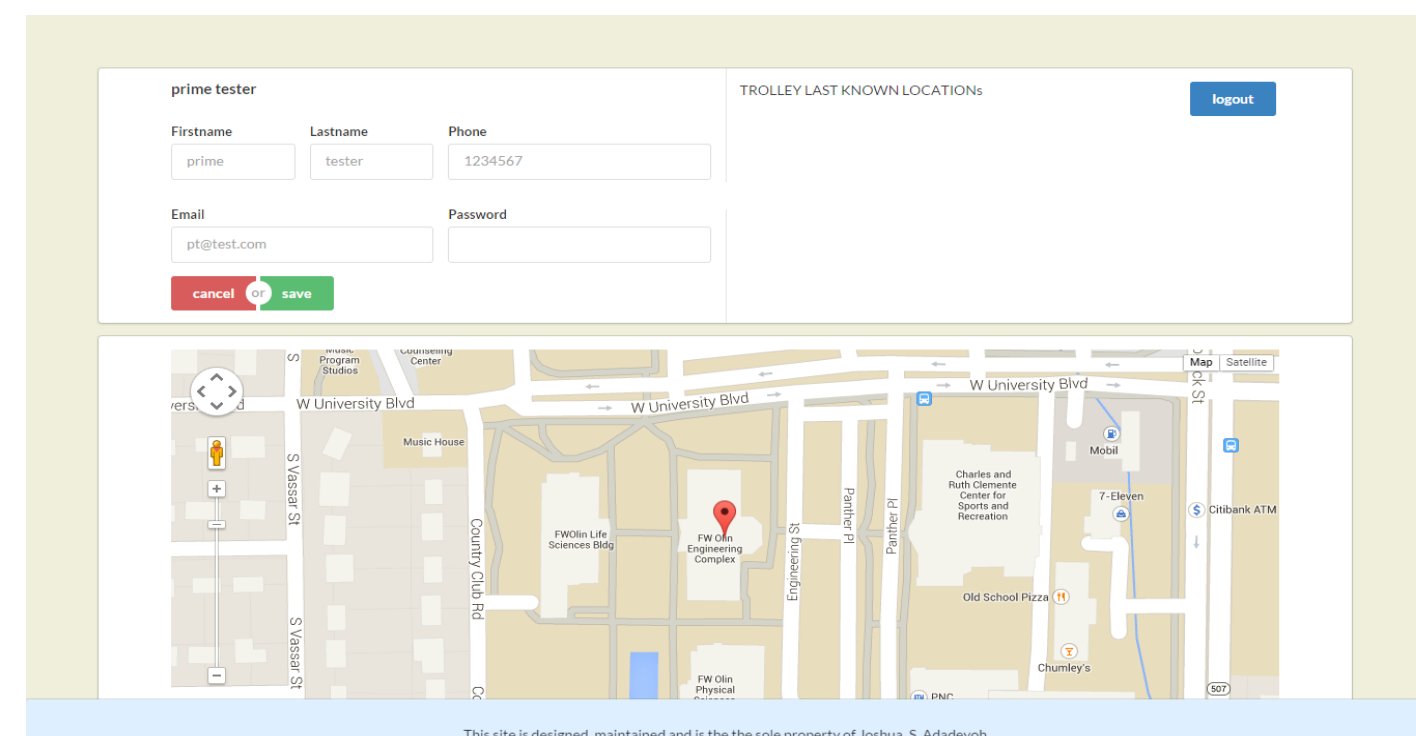
The project involves building a software system to send mobile alerts to users when the Florida Tech Trolley is nearing their signed-up location. The users will be able to sign up for alerts and notifications for a particular trolley stop and for different time intervals. When the trolley is nearing the location, the user will receive an alert with the estimated time of arrival, so they can be at the stop on time.

PROJECT BLOCK DIAGRAM



BASIC SYSTEM FEATURES

- Add/Edit user account
- Add/Edit user preferences
- Sign up/Edit location alerts
- Display live trolley tracking data
- Send notification alerts to user when trolley is nearing their location



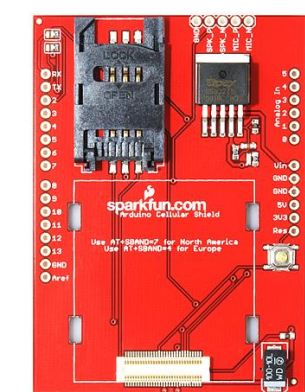
Screenshot of the editAccount page, where the user can go in to change their details

The server opens a connection to the Arduino to get the GPS data at specific intervals. This data is processed and sent to the web application, updating the map and current location of the trolley

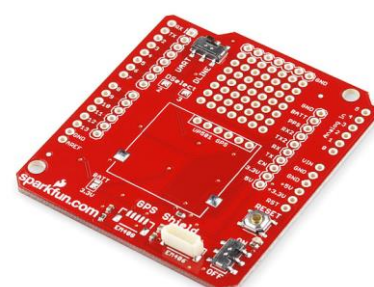
HARDWARE



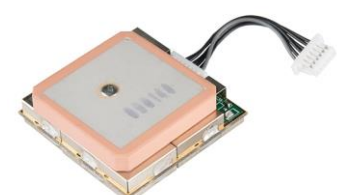
ARDUINO UNO R3



SPARKFUN CELLULAR SHIELD

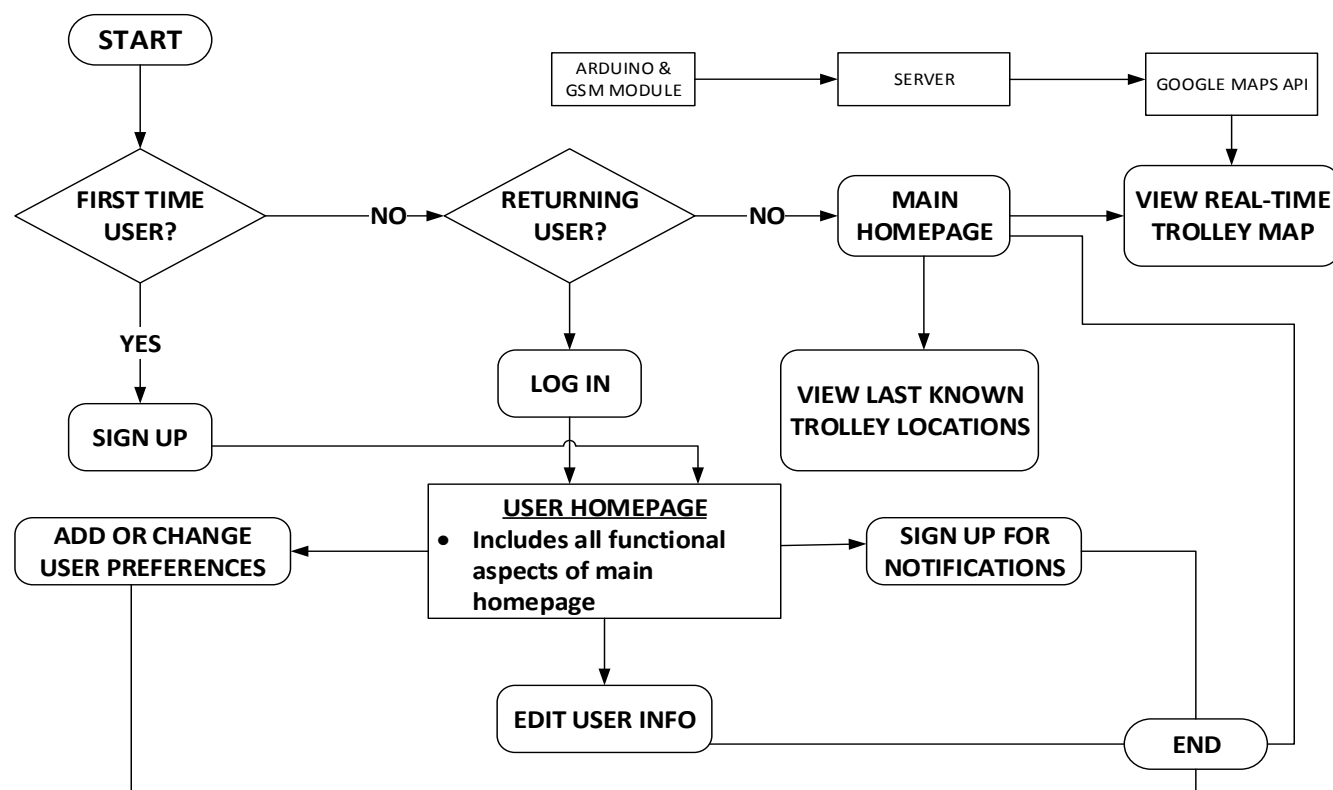


SPARKFUN GPS SHIELD



GPS RECEIVER-EM-506

SOFTWARE FLOW CHART



```

index.php
1 <?php
2 //require 'vendor/autoload.php';
3 require 'config.php';
4 session_start();
5
6
7
8
9 $app->get('/login', '\Controller\Home:loginForm')->name('loginForm');
10
11 $app->post('/home', '\Controller\Home:login')->name('UserLogin');
12 $app->post('/signup', '\Controller\Home:signup')->name('UserSignup');
13
14 $app->get('/', '\Controller\Home:home')->name('home');
15 $app->get('/home', '\Controller\Home:home')/*->name('test')*/;
16 $app->get('/edit', '\Controller\User:edit')->name('editAccount');
17 $app->post('/save', '\Controller\User:save')->name('userSave');
18 $app->get('/logout', '\Controller\Home:logout')->name('logout');
19 $app->get('/locations', '\Controller\User:locations')->name('editLocations');
20
21
22
23 // $app->post('/home', '\Controller\Home:test')->name('HomeTest');
24 // $app->get('/home', '\Controller\Home:display')->name('home');
25 // $app->get('/logout', '\Controller\Home:');
26
27 $app->post('/', function(){
28     $app = \Slim\Slim::getInstance();
29     echo "called post from anonymous function<br>";
30     echo $app->request->params('password');
31 });
  
```

Code Snippet showing the index page in slim mvc (model –view –controller) format

NORTHROP GRUMMAN



Engineering & Science
Student Design Showcase
at Florida Institute of Technology

