

# CS50 Shuttle

[shuttle.cs50.net](http://shuttle.cs50.net)

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CS50 Shuttle

shuttle.cs50.net

start engine  
teleport

Pick Up   Drop Off

no announcements at this time

0. Empty Seat  
1. Empty Seat  
2. Empty Seat  
3. Empty Seat  
4. Empty Seat  
5. Empty Seat  
6. Empty Seat  
7. Empty Seat  
8. Empty Seat  
9. Emotv Seat

Jenny Ye to Kirkland House

Google earth  
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Matthew Cawdle to Kirkland House

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Marta Boalic to Adams House

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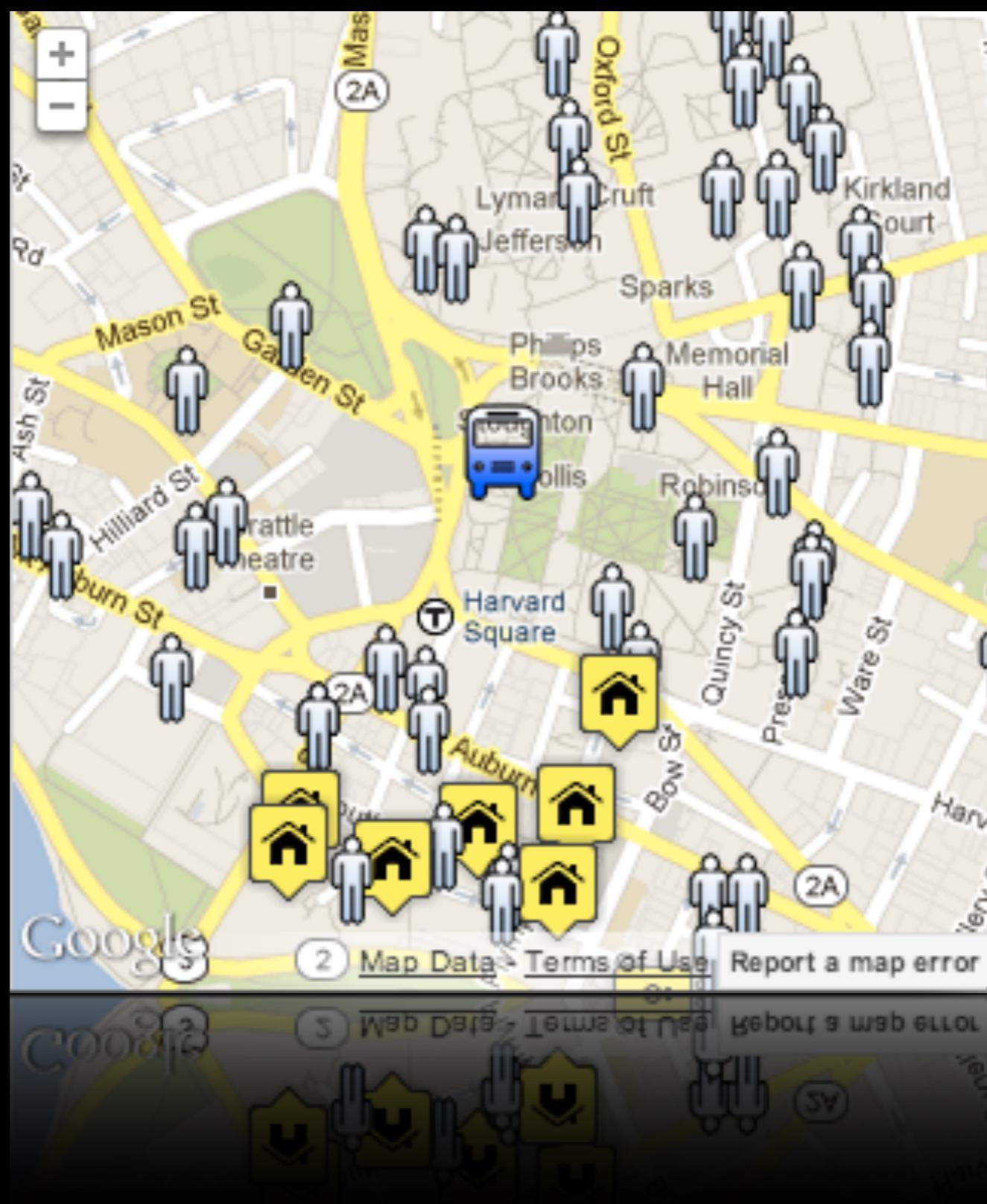
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no announcements at this time

amazing site to see announcements on

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10. Empty Seat  
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12. Empty Seat  
13. Empty Seat

# ingredients

- HTML, CSS
- JavaScript
  - loops, conditions, variables, functions
  - arrays, objects (encapsulation)
- APIs
- GIS

# season to taste

- DOM (trees)
- event handling
- anonymous functions
- distance between points
- camera angles
- ...

# starter code

- index.html
- service.css
- houses.js
- passengers.js, passengers/\*.jpg
- shuttle.js
- service.js
- ...

```
var HOUSES = {  
    "Adams House": {lat: 42.37189, lng: -71.11639},  
    "Cabot House": {lat: 42.381842, lng: -71.123857},  
    "Currier House": {lat: 42.381704, lng: -71.125773},  
    "Dunster House": {lat: 42.368648, lng: -71.115929},  
    "Eliot House": {lat: 42.370355, lng: -71.121041},  
    "Kirkland House": {lat: 42.370699, lng: -71.120859},  
    "Leverett House": {lat: 42.36993, lng: -71.117238},  
    "Lowell House": {lat: 42.370572, lng: -71.118343},  
    "Mather House": {lat: 42.368196, lng: -71.115376},  
    "Pforzheimer House": {lat: 42.38229, lng: -71.124839},  
    "Quincy House": {lat: 42.370741, lng: -71.11698},  
    "Winthrop House": {lat: 42.370188, lng: -71.11955}  
};
```

```
var PASSENGERS = [  
  {  
    username: "achang88",  
    name: "Alex Chang",  
    house: "Kirkland House"  
  },  
  {  
    username: "afaux",  
    name: "Ainsley Faux",  
    house: "Adams House"  
  },  
  {  
    username: "agore",  
    name: "Al Gore",  
    house: "Dunster House"  
  },  
  ...
```

# challenges

- implement pickup()
- implement dropoff()

# design decisions

- how to represent shuttles' seats?
- how to find passenger among  $n$  seats?
- ...

# choose your own adventure

- implement points
- implement a timer
- group passengers by house
- implement flying (via Konami Code)
- replace blue bus with an arrow
- implement teleportation
- add gas pedal
- implement gas tank
- implement autopilot
- ...

# weaknesses

- warrants starter code
- can be (made to be) too easy
- requires Internet access
- requires (sometimes buggy) plugin

# strengths

- challenges range from easy to hard
- lots of opportunities for encapsulation
- introduces students to third-party APIs
- can be transplanted to any campus
- fun to drive around campus :-)

# demo!

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