

ECMap

International Justice League of Super Acquaintances

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Section 101 - Team 4

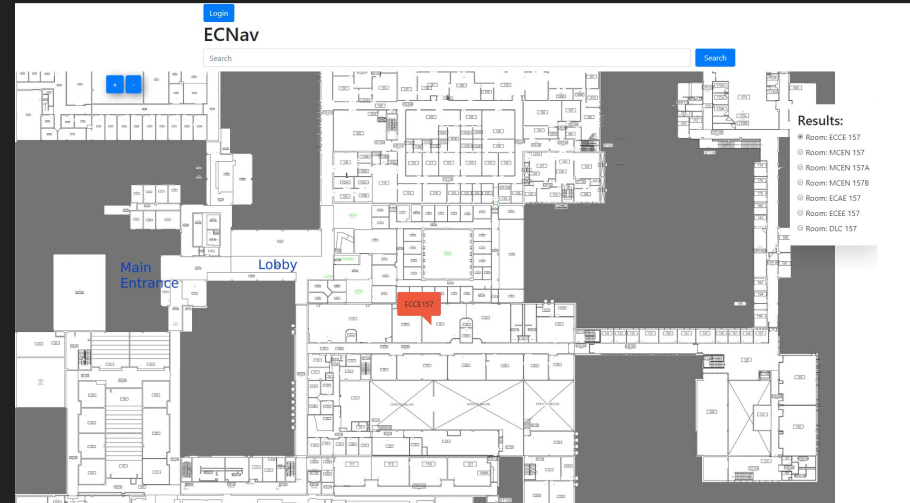
ECMap Description

“Easy to read, easy to use, navigable map for Engineering Center students.”

CU's Map system gets you to the building... but then what?


Made in CAD from official Engineering Center blueprints

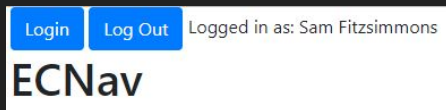
Useful for new and old students alike!



ECMap Features

Key Features

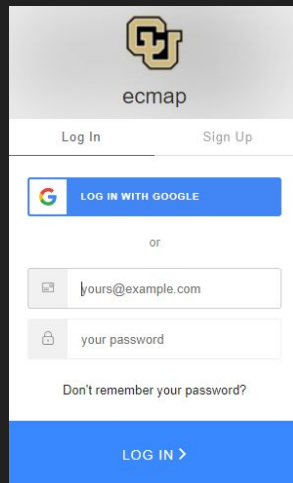
- Dynamic, scaleable map 
- Pin-dropping Javascript application
- Search function by room identifiers (class num, wing ID, etc.)
- Login system



ECNav

Search

Search



Front-end Tools Used

HTML

Javascript

- home.ejs for most functions

HTML



CSS



```

function zoomIn(){
if(zoomLevel<0){
    zoomLevel++;
    realWidth = parseFloat(realWidth* (8/7));
    document.getElementById("map").width = realWidth;
    var pixelCords = document.getElementsByClassName("speech-bubble")[0];
    document.getElementsByClassName("speech-bubble")[0].style.top = (((pixelCords.offsetTop-pixelCords.offsetHeight+10)*(8/7)) + (pixelCords.offsetHeight)+5) + "px";
    document.getElementsByClassName("speech-bubble")[0].style.left = (((pixelCords.offsetLeft)-pixelCords.offsetWidth+20)*(8/7)) + (pixelCords.offsetWidth)+4) + "px";
    document.getElementById("mapDiv").scrollTop = ((document.getElementById("mapDiv").scrollTop+(document.getElementById("mapDiv").offsetHeight/2)) * 8/7)
    - (document.getElementById("mapDiv").offsetHeight/2);
    document.getElementById("mapDiv").scrollLeft = ((document.getElementById("mapDiv").scrollLeft +(document.getElementById("mapDiv").offsetWidth/2)) * 8/7)
    - (document.getElementById("mapDiv").offsetWidth/2);
}
}

```

```

function pinDrop(x,y) {
    while(zoomLevel<0){
        zoomIn();
    }
    document.getElementsByClassName("speech-bubble")[0].style.display = "block";
    document.getElementsByClassName("speech-bubble")[0].style.top = (y-document.getElementsByClassName("speech-bubble")[0].offsetHeight-16) + "px";
    document.getElementsByClassName("speech-bubble")[0].style.left = (x-document.getElementsByClassName("speech-bubble")[0].offsetWidth+20) + "px";
    while(zoomLevel!==-8){
        zoomOut();
    }
    document.getElementById("mapDiv").scrollLeft = x * Math.pow(8/7,zoomLevel) - document.getElementById("mapDiv").offsetWidth/2;
    document.getElementById("mapDiv").scrollTop = y * Math.pow(8/7,zoomLevel) - document.getElementById("mapDiv").offsetHeight/2;
}

```

Back-end Tools Used

Remote MySQL

- room_data Database
- Searchable fields

GitHub

- File management



Integration Tools Used

Node.js

- Express
- Auth0 (login tokens/callbacks)
- Google API (CU email support)

Heroku

- Direct integration with GitHub



Project Management Tools Used

Trello

Slack

Github



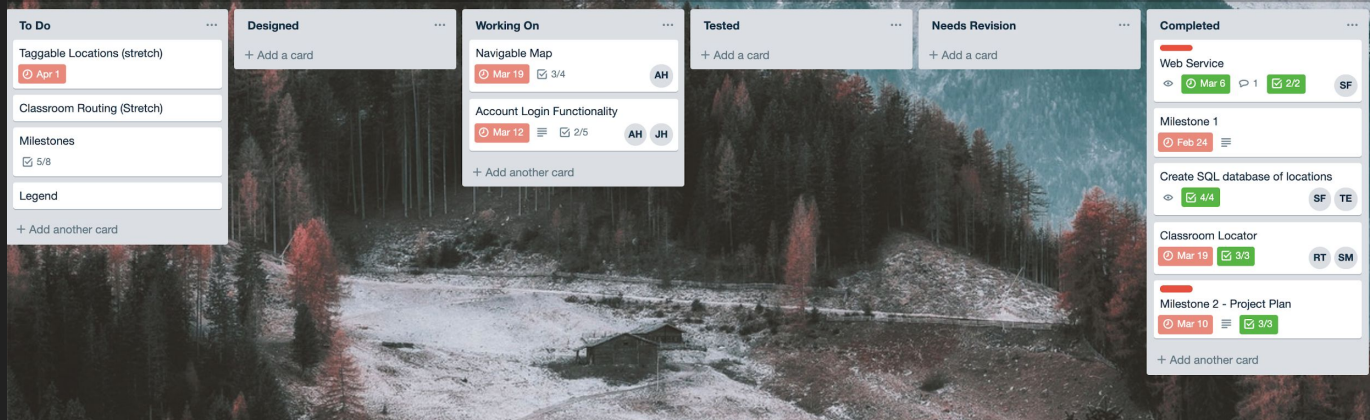
Development Methods

“Agile” Approach

- Weekly meetings, task delegation
- Slack for interim communication

Successful, adaptive approach

- Ability to pivot and change project as needed



Challenges

Node.js integration

- Heroku saved the day!

Working with massive images

- Render times vs. quality of map

Integration of all parts

Time constraints

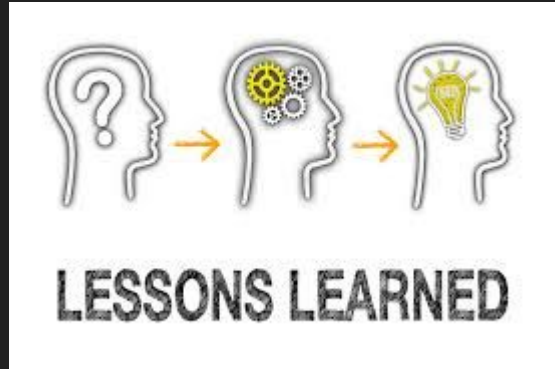


Lessons Learned

Pivoting as you encounter issues

- Flexible project design

Learning new skills/productivity tools



Demo

<https://ecmap.herokuapp.com/>