**Suggested resources and planning ideas for your Projects (Capstone):**

Communications

* Slack
  + Calls
  + Video Chat
* Zoom
  + Breakout rooms during class
  + Ask Piyush to use class Zoom during off hours
* GitHub
  + advanced git - merging, reverting, branching, resetting
  + We will cover in class

Project Management - DO NOT pay for anything without talking to Piyush first!!!!

* Trello - <https://trello.com/> - delegation and strategies

Database Design

* Vertabelo - <https://www.vertabelo.com/> - designing SQL databases

UI Design

* Balsamiq - [https://balsamiq.com/](https://balsamiq.com/%20) - mockups for web UI
* Moqups - [https://moqups.com/](https://moqups.com/%20) - wireframe mockups for web UI
* Mockingbird - [https://www.gomockingbird.com/home](https://www.gomockingbird.com/home%20) - wireframe mockups for web UI
* Figma - [https://www.figma.com/](https://www.figma.com/%20) (Extremely useful for mockups & wireframing)
  + [Wire frame tutorial in figma](https://www.youtube.com/watch?v=c9Wg6Cb_YlU)
  + Youtube has tons of figma tutorials

Planning and Presenting

* InVision - <https://www.invisionapp.com/> - visual representation/design
* Pen and paper - Draw it out!!!
* Slides - PowerPoint, Google Slides
* If you have a white board, use it and take pictures. Very simple and effective.

Tech Stacks - which makes sense for what you are trying to do?

* HTML
* CSS, Bootstrap
* JavaScript, jQuery
* Backend - Node, servers, APIs
* Templating - Pug or EJS
* Database - MongoDB, Postgres, MySQL
* React
* CRUD functionality?
* Multi-page or SPA?

Strategies

* Agile
  + Very structured
* Informal
  + Loosely structured
* Process (as an example)
  + Meet with team and discuss overall picture of what project will achieve
    - Come up with timeline - you have roughly 8 weeks to complete
    - Plan LARGE!!! But be pragmatic.
    - Set realistic milestones - MVP => minimal viable product
  + Delegate members as appropriate
    - Whomever owns the project needs to lead and help delegate responsibilities.
    - Not necessarily do the things you are strong at; take this opportunity to work on your weaker areas
  + NO coding!!!
    - Design visually
    - Talk over ideas - share concerns
    - Realistic milestones or need to redo timelines?
    - Research!!! Think outside the box. Just because we have not talked about <https://leafletjs.com/> (interactive mapping) or <https://www.collinsdictionary.com/api/> (dictionary API) or <https://api2.bigoven.com/> (recipe API) does not mean there are not cool things out there for you to use
    - Do not go with first results - keep searching
    - Ask yourself, ‘and….what else can we do?’

MVP (Minimal Viable Product)

* Sit with your team and decide what is the absolute minimum needed for your project to be considered “done”
* What does it take for a user to get some value out of it?
* Consider every other feature of your project to be “extras” and only start on those once the MVP is completed
* Re-evaluate your timelines and deliverables
* Re-evaluate delegations and task assignments

Start coding

Once a week (probably Saturdays) deliver a status check of where your group is to the entire class

* Other teams may be going through same challenges so great way to share ideas
* This includes how you planned what you are doing as well as any code - screen share!!

Misc apps and APIs - suggestions but MANY more out there!!!

* Free Design Resources
  + [Design Resources For Developers](https://github.com/bradtraversy/design-resources-for-developers)
  + [Marquee Generator](https://www.html.am/html-generators/marquee-generator.cfm)
* Recipes/Nutrition
  + [Spoonacular](https://spoonacular.com/food-api)
  + [Big Oven](https://api2.bigoven.com/)
  + [Chomp](https://chompthis.com/api/)
  + [BigOven API](https://api2.bigoven.com/)
* Movies
  + [IMDB](https://imdb-api.com/)
  + [The Movie Database](https://developers.themoviedb.org/3/getting-started/introduction)
* Maps
  + [Leaflet](https://leafletjs.com/)
  + [Google Map APIs](https://developers.google.com/maps/documentation/api-picker/?_ga=2.263595589.812880822.1596294168-1698467682.1596294168)
* Books
  + [Turnjs](http://turnjs.com/)
  + [Open Library](https://openlibrary.org/developers/api)
  + [Library of Congress](https://libraryofcongress.github.io/data-exploration/)
  + [Good Reads](https://www.goodreads.com/api)
* Pictures/Images
  + [Pixabay](https://pixabay.com/)
  + [Unsplash](https://unsplash.com/)
* Remove backgrounds - creating pngs - [Removebg](https://www.remove.bg/)
* Charts/Data
  + [Chart.js](https://www.chartjs.org/)
  + [D3](https://d3js.org/)