# 17-356/17-766: Software Engineering for Startups
# Homework 2: Sprint 0

## 50 points
*Due: February 16th, 11:59 pm on Gradescope*
***This homework is to be done with your group***.

In this homework, you will work together with your team to begin initial design, and prepare for your first sprint as a group.

References:
- [Sprint 0](#)
- [startup sprint](#)
- [Github Learning Lab](#)
- [Github Guides](#)
- [Dronuts Starter Kit](#)

The learning goals of this assignment are that, once completing it, you will be able to:
- Identify the key user stories that will constitute the Minimum Viable Product (MVP).
- Justify which features to include based on priority, and time available
- Understand and practice the basic building blocks for how to create and deploy a modern web app (related, in some fashion, to the MVC model)

Your task this week is to prepare for the initial sprint:

- **Create your project backlog**
  - Reconcile all individual user stories into a backlog of team user stories. If you want to reconcile these within an online tool, e.g. Trello, Zenhub, Github Issues, that works too.
  - Estimate the amount of time your team will take to implement each user story, and justify your estimation.
  - Write a document listing the user stories your team will include in the MVP and which your team will not. Add a SHORT justification for each user story decision. NOTE: you cannot select more than 40 hours worth of work in a single week, per team.

- **Select a Backend Framework**
  - Create a set of business objectives and criteria for deciding what type of framework you should use.
  - Evaluate two frameworks, identifying their strengths and weaknesses.
    - LoopBack
    - Express
  - Choose (as a team) which framework is preferable for the development of [Dronut](#), and write a business-style email justifying your choice of framework to your investors.

- **Prepare to write the first line(s) of productive code. This will include:**
  - Agree upon and configure development communication tools, e.g. Slack, etc...
  - Agree upon and configure your Project Management infrastructure, including bug tracking, task management, etc...
  - Create a repo for your team using the Github classroom link: https://classroom.github.com/g/zGVGO1kq   NOTE: only one student should make the assignment repo, then add the rest of the team.  DM us on slack if you have issues.
  - Write a simple "hello-world" app with a test (even if it's fake) and follow the application instructions in **README** that will be cloned into your classroom repo.
  - Setup your team's development infrastructure, including Development Environment, Continuous Integration (CI), code style (via linter), and deployment pipeline as per the README.
  - Deploy your "hello-world" application for the world to see!

  **Note: As mentioned, instructions for getting started can be found in the README.MD once you setup your classroom repo. This includes creating/joining a GitHub team, creating a repository, setting up Travis CI (or Github actions), Docker, and deploying on an Microsoft Azure instance.**

**Deliverables:**
One document that includes:
- Your product backlog (or a pointer to your backlog in a location accessible to the staff, e.g. Trello, Github Issues, ZenHub)
- A short justification for which user stories you are including in your MVP
- A short document that describes which backend framework you are choosing, and why you decided on that framework
- A URL which is running your starter repository

**Grading:**
This homework is worth 50 points. To receive full credit, you must  have a reasonable product backlog that includes estimates and a short (no more than a few sentences) justifications for the user stories you choose for your MVP. You should have a reasonable justification for which framework you choose, and you should be ready to write your first line of real, productive code in the next sprint.