CS 307 Team 1 Project Charter

Team members:
Andrew Arpasi, Andrew Rothwell, Aung Myat, Matin Hormati, Noah Johnson, Vishnu Vijayan

Project Name:
- **Vyden**

Problem Statement:
Learning has conventionally taken place in a live, physical lecture where the overcrowding of students and distractions of others are all too real of problems. Vyden is able to conquer these adversaries by administering an engaging virtual reality classroom experience. When the weather takes a turn for the worst, you have the convenience of watching lectures without being in the actual class. At Purdue, the only legitimate service similar to Vyden is Boilercast. The issue here is that Vyden surpasses Boilercast in that it does more than just streaming lectures. With Vyden's customizable interfaces, 3D models in custom environments, and advanced learning metrics, learning has never felt more real.

Project Objectives:
- Obsolesce the current classroom experience by enabling students to attend lectures remotely using virtual reality.
- Solve the overcrowding problems present at large universities by allowing students to attend class from the comfort of anywhere.
- Provide an active learning environment for students to gain new perspectives through the use of interactive technology.
- Implement professor and student interfaces to traverse classes with ease.
- Break through the traditional classroom restrictions while also keeping the classic teaching methods.
- Embedded learning objectives including quizzes.

Stakeholders:
- Users: Universities looking to expand their distance learning programs through the use of technology and students looking to learn in a more relaxed environment.
- Project Manager: Abid Kaisani
- Developers - The team:
    - Andrew Arpasi
    - Andrew Rothwell
    - Aung Myat
    - Matin Hormati (Scrum Master)
    - Noah Johnson
    - Vishnu Vijayan (Team Leader)

Project Deliverables:

- A technology stack with a backend, frontend and VR mode.
- A backend using Firebase and Node for authentication, data storage, and management.
- Classroom environment along with 3D models written in Three.js and A-Frame (WebVR).
- Instructor and student interfaces written Angular 5.
- Instructor interface for managing classes, creating lectures or 3D models, and quiz creation.
- Student interface for listing and attending enrolled courses and for the VR environment including quiz responding.