

1. Problem Statement
 - a. Who: CPRE 288 instructors
 - b. What: Automatic Homework question generation and grading
 - c. When: End of Spring Semester
 - d. Where: ISU campus, online homework, implemented to Canvas
 - e. How: Prairie Learn Framework
 - f. Our problem statement is that we need to make a way to generate homework questions for CPRE 288 students as well as an automated grader for the questions using Prairie Learn Framework and to connect the grades to canvas by the end of the Spring Semester so that instructors don't have to waste time doing it.
2. Intended Uses and Users
 - a. Who will use the product?
 - i. CPRE 288 students, CPRE 288 instructors indirectly
 - b. Who will benefit
 - i. Mostly CPRE 288 instructors since they don't have to make problems and grade them
 - c. Who cares
 - i. CPRE 288 instructors for the same reason as before. Students wouldn't really care where the problems come from
 - d. Relevant Users/User Groups
 - i. CPRE 288 students, CPRE 288 instructors
 - ii. Only 2 groups because nobody else will be using it outside of CPRE 288
 - e. Persona
 - i. CPRE 288 student
 1. Likely wants to just finish the homework fast
 2. Wants the questions to be easy
 3. Really wants the questions to at least make sense
 - ii. CPRE 288 instructor
 1. Wants to save time creating problems and grading them
 2. Wants students to understand the material as much as possible
 3. Wants students to learn from the homework
 - f. Needs related to the project
 - i. Instructors need a way to generate problems so they don't have to do it every semester
 - ii. Instructors need a way to automatically grade problems so they don't have to do the same thing over and over
 - iii. Instructors need a way to automatically put the grades in Canvas so they don't have to type all the grades in over and over
 - iv. Students need the assignments to be easily understandable so that they aren't constantly asking instructors, especially since the instructors did not make the problems and may not be of good help
 - g. How they might benefit

- i. Instructors will save a lot of time from not having to create problems, grade them, and type the grades in canvas. Each semester this is used will increase the amount of time saved
- ii. Students might benefit slightly from the questions likely being similarly formatted, etc. Making them easier to understand