



CS 428
Creating Requirements

Fall 2022

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The hard truth of requirements



- ◇ Organize in terms of explicit features that define what you want to present for the prototype demo (02/28), work-in-progress demo (03/21) and final demo (04/11)
- ◇ Focus on output, user interface, results – that will define both internal processing and necessary input.
- ◇ Core goal: your requirements should form the project baseline that defines what you're building
 - ◇ Bob Millar at ARINC: “If you don't know what you're building, how will you know when you're done?”
- ◇ It is as important to define what you are *not* building as what you *are* building (cf. Pages spreadsheet)
- ◇ Watch Dr. Knutson's podcast on software requirements [[here](#)]
- ◇ You should be revising this document constantly throughout the semester
- ◇ **Look at prior semester wikis for both ideas and actual document formats**

Why requirements?

- ◇ You're writing them before you (fully) know what you want to build
- ◇ You're writing them before you know for sure if you can build it
- ◇ The wrong people are often involved writing them
 - ◇ Managers who don't know or understand what's technically feasible in the desired time-frame
 - ◇ Engineers who are more interested in building something cool rather than what the customer will pay for
 - ◇ Marketers who want the impossible

The Many Challenges of Requirements

- ◇ Customers usually don't know what they really want until they see something working
- ◇ General simple requirements explode into large numbers of detailed design and implementation requirements
- ◇ Failure to formally manage requirements (change control) leads to massive scope creep
- ◇ Strengths & weaknesses of waterfall-ish vs. agile-like approaches
 - ◇ Waterfall: risk of 'analysis paralysis'
 - ◇ Agile: risk of blind canyon/stuck on a local maximum

Requirements Challenges (cont.)

- ◇ Due by **midnight on Saturday (10/01)**
 - ◇ Your team's **requirements document** via your project wiki page
 - ◇ Suggestion: look at projects from prior semesters to see what they did
 - ◇ Feel free to use their document format
 - ◇ Your team's next **status report (#2)** via your project wiki page
 - ◇ Individually, you need to watch and pass off **podcast #2**
- ◇ Reading due **by start of class next Monday (10/03)**
 - ◇ *Peopleware*, Part II (**chapters 7-13**)
 - ◇ Webster readings **#3**
 - ◇ **Can count up to 2 hours of reading/podcast as billable**
- ◇ Topic for next week: project estimation and scheduling

For the coming week