

CS 428

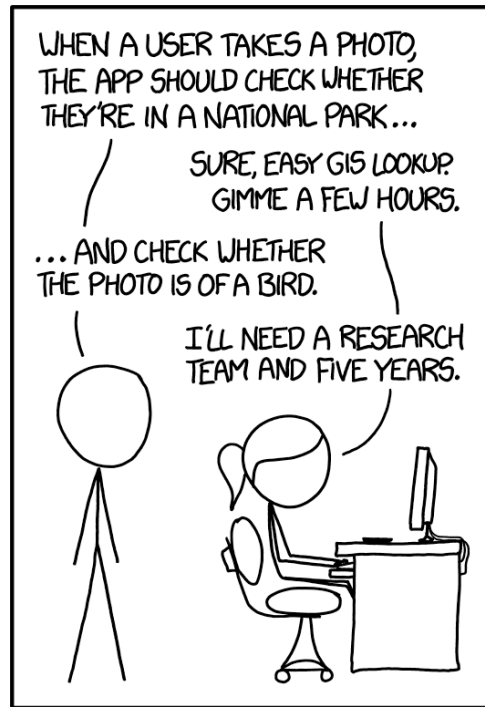
Creating

Requirements

Winter 2021

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The hard truth of requirements



IN CS, IT CAN BE HARD TO EXPLAIN
THE DIFFERENCE BETWEEN THE EASY
AND THE VIRTUALLY IMPOSSIBLE.

- ▶ Organize in terms of explicit features that define what you want to present both for the initial demo (March 29th) and then for the final demo (April 12th)
- ▶ 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
- ▶ 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

The Many Challenge of Requirements

- ▶ **Due by midnight on Saturday (02/13)**
 - ▶ 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 next **status report (#2)** via your project wiki page
- ▶ **Reading due by start of class next TUESDAY (02/16)**
 - ▶ *Peopeware*, 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
- ▶ Podcast #3 needs to be done by a week from Saturday (02/20)

For the coming week