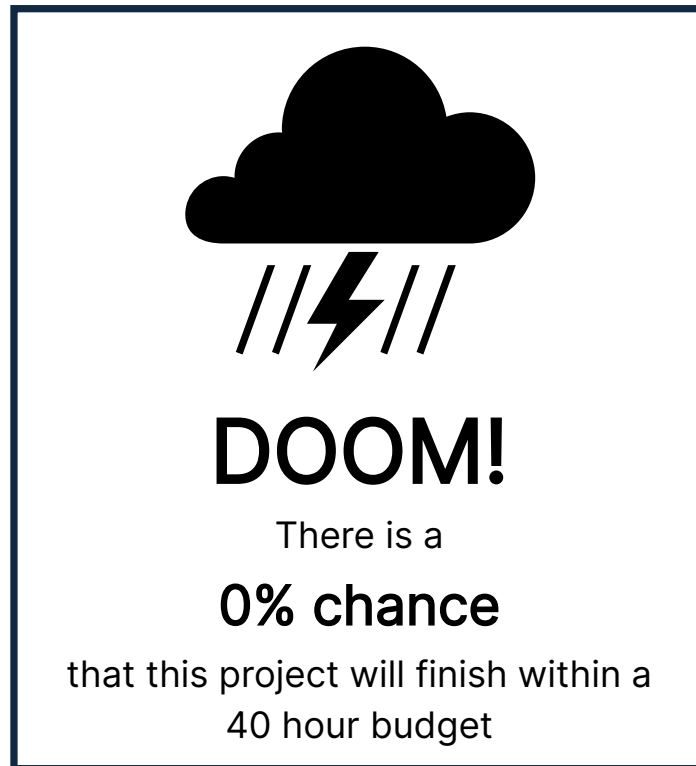


(DEMO: Add Dark Mode)

[Edit](#)

WARNING: This is a transient demo. When you leave or refresh this page, your work will be lost. Proceed with caution!

Click the Edit button to edit the Markdown, or to replace it with your own. It's just CommonMark markdown, with these extensions:

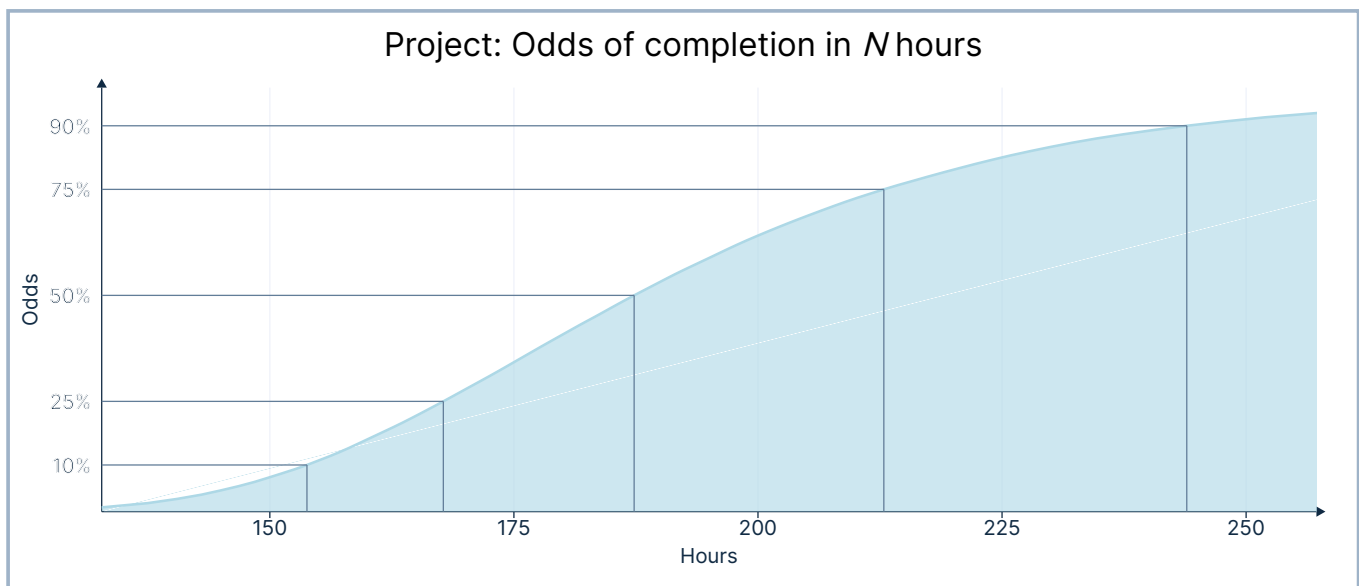
1. `{1-4h}` is an inline time estimate for a task taking 1 to 4 hours.
2. You can put multiple estimates in the same block of text, e.g. Configure and build the library `{1-2h}`, adapt packaging scripts for our distribution `{2-8h}`
3. You can mark an estimate as closed by adding the `closed` attribute after the range, e.g. `{1-4h closed}`. Closed estimates do not contribute to `domcheck` or `graph` visualizations.
4. If you have multiple independent tasks with the same estimate range, e.g. 5 updates, you can write `{5x 1-4h}`. Note that this is 5 separate `{1-4h}` tasks, which is *not* the same as `{5-20h}`.
5. If you are doing larger tasks, you can use `{1-4d}` to indicate 1 to 4 days, or `{1-4w}` to indicate 1-4 weeks. A day is equivalent to 8 hours, a week is equivalent to 40 hours. (Whether you use `h`, `d`, or `w`, these numbers are just used to estimate the total number of dedicated hours needed to complete the project. Remember,

no real person will routinely have a full 8 hours a day or 40 hours a week to put

into project tasks.)

6. `{= doomcheck 10h =}` on a line by itself turns into a box indicating the odds of completing the work in the section it's in -- including subsections -- within 10 hours. (The "h" suffix for hours is required. No other suffixes are supported here yet.)
7. `{= graph =}` on a line by itself turns into a graph of the odds of completing the work in the section it's in -- including subsections -- vs. the number of hours worked.

Let's say we have a web app. We've been asked to implement an optional dark mode. The user will manually select dark mode as a new settings field. Management thinks this should be half a day of UX work and a few days of development. So let's say 40h hours of person time. You already got a hint from the top of this page that this isn't going to work out well. What's it actually look like? Let's go to the graph!



(It's usually a good idea to put a graph like this in the front matter, before any Markdown headers, to ensure that it shows the totality of project work.)

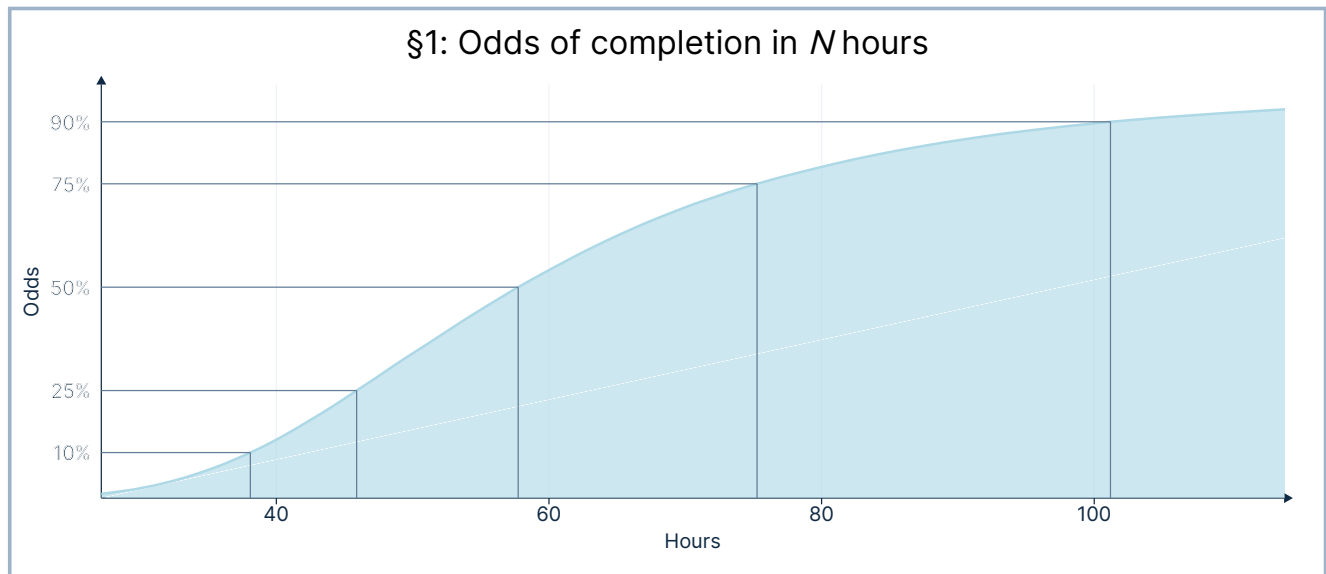
Whoah! That looks like... quite a bit more than 40 hours of work. Like, we've only got 34% odds of finishing given 5x the number of hours:



There is a
65% chance
that this project will finish within a
200 hour budget

How can that be? Let's look at the details in our work plan below.

§1 UX design



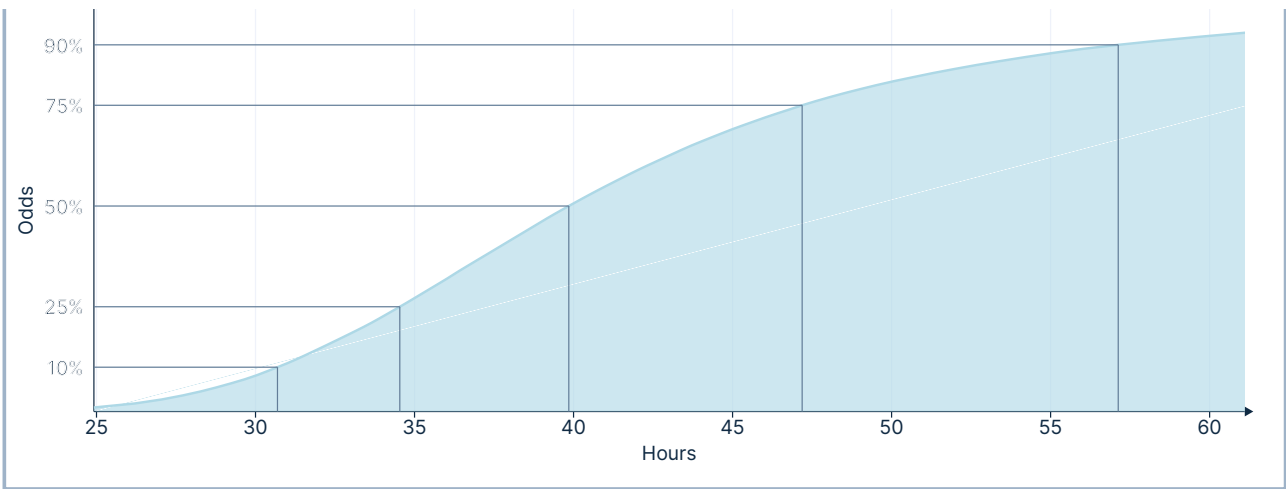
- Update wireframes for extant Settings page to include dark/light mode selector. {1-2h}
- Update style guide to show how to style a boolean toggle. {1-4h} Rationale: it's the first boolean toggle on Settings, so we need a little time to figure out the styling.
- Design review with a buddy and design iteration {4-20}. We could defer this.
- Develop "dark mode" style alternative to "light mode" {10-40h} baseline plus detailing for each of 8 distinct pages {8x 1-4h}. (Our tool outputs a dark-mode CSS file with the same class names as the light-mode CSS file.)

§2 Software implementation

Technology background: the app uses GraphQL between the front and back ends, and storage is in an SQL database. Front-end styling is handled with a straightforward CSS file.

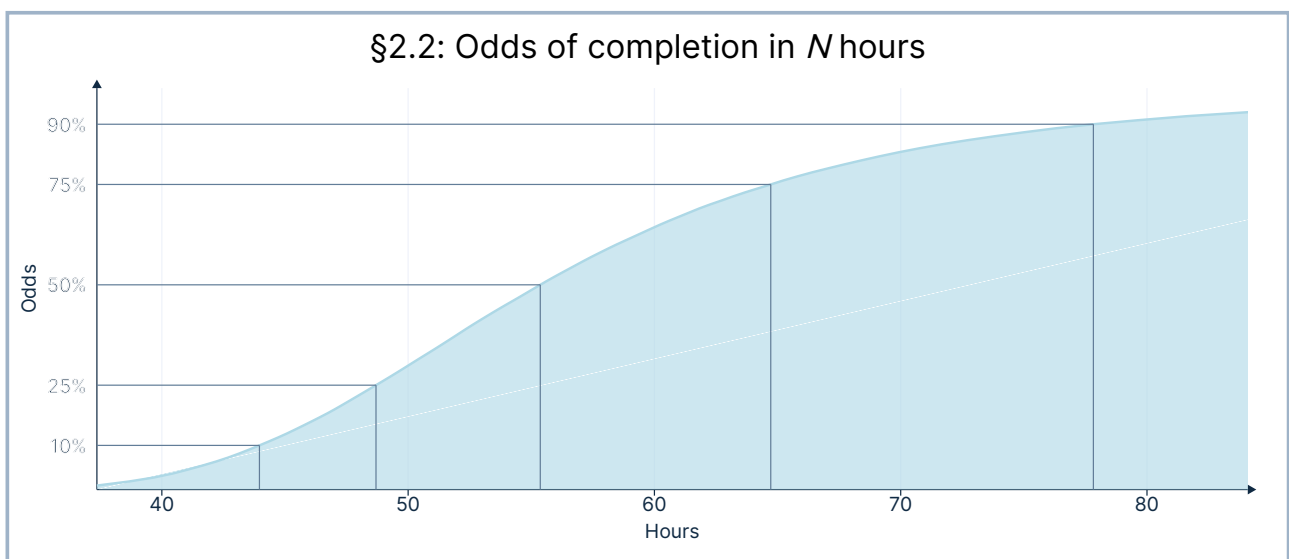
§2.1 Back end

§2.1: Odds of completion in N hours



- Add "dark mode" boolean to database user-preferences table schema (i.e. implement up and down migrations) {2-8h}
 - Rationale: it's one boolean.
 - Rationale for the rationale: The product manager promises it's just light or dark mode, we're not going to have a bunch of styles to choose from, see email dated 8/1.
 - Code review, one reviewer: {1-2h}
- Add "dark mode" to server data models, make sure it is read and saved when reading/saving to the user-preferences table {2-4h} for implementation (rationale: there are a few variant models so we have to make sure to get them all), {2-4h} to add tests to the test suite. Code review, three reviewers: {3x 1-4h}
- Add "dark mode" boolean to user-preferences GraphQL query and mutation API {1-4h} and add tests to the GraphQL test suite {2-4h}. Code review, three reviewers: {3x 1-4h}

§2.2 Front end



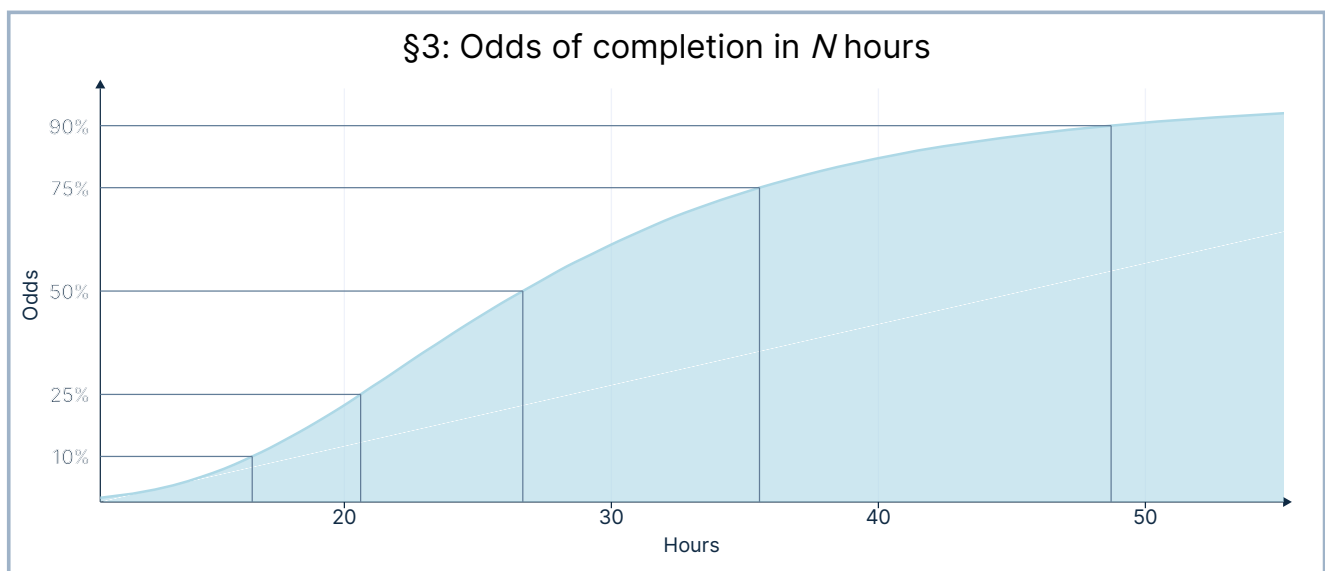
§2.2.1 Read/set dark mode boolean as part of Settings

- Add boolean toggle to UI widget library {1-4h} using a standard element from our chosen front end framework. Code review: {1-2h}
- Style new toggle per UX style guide {1-4h} initial, add extra time for pixel-level negotiations and/or hacking with 2 UX people {2x 1-4}
- Add "dark mode" setting state to internal model state {1-4h}, and ensure it gets saved in and restored from localStorage for a good default next site visit {1-4h}. Code review {3x 1-2}
- GraphQL:
 - Expand GraphQL query to retrieve "dark mode" setting from the server {1-4h} and set it in model state.
 - Expand GraphQL mutation to set dark mode per toggle switch configuration when settings are saved using existing save mechanism. {1-4h}
 - Code review {3x 1-2h}
- Add "dark mode" toggle switch to the extant Settings page {1-2h}, with value set from the server-provided settings. Rationale for narrow range: this is really straightforward, risk is mostly captured in preceding items. Code review {3x 1-2h}
- Add test steps to the QA script for front-end testing that verifies that dark mode toggle is read and updated properly {4-16h}. Rationale: writing and screenshotting and formatting test script material always takes longer than planned. Document review: {2x 1-2h}

§2.2.2 Selecting dark mode

- Use JS to dynamically select one of the two .css files - original or dark mode - based on user preferences. {1-4h} Code review {3x 1-2h}

§3 Documentation



- Update all existing screenshots of Settings page in online help to show the new toggle {4-16h}
- Add subsection describing how to set dark mode {1-4h}
- Add some screenshots showing light vs. dark mode on a page or two {1-4h}
- Proofreading/copyediting {4-12h}