software
studio

final project outline

Daniel Jackson
# Design Overview Purpose and goals

Brief description of system to be built

Key goals and purpose

Motivation for development (e.g., deficiencies of existing solutions)

## Context diagram

Establishes boundary of system

Interactions between system and external entities

## Concepts

### Key concepts

Brief explanation of key enabling concepts

### Object model

Object model describing main state components

Implementation details excluded

Small details that don’t impact behavior omitted or abstracted

Syntactically valid diagram with consistent naming & layout

Generalization used appropriately

Names of sets and relations well chosen

Definitions in accompanying text of non-obvious elements

## Behavior

### Feature descriptions

Succinct but precise descriptions of each feature

### Security concerns

Summary of key security requirements and how addressed

How standard attacks are mitigated

Threat model: assumptions about attackers

### User interface

Wireframes for application

Flow between pages indicated, with named actions

Errors accounted for

## Challenges

### Design challenges

List of problems to resolve in concepts, behaviors or implementation

For each problem: options available, evaluation, which chosen

Note on code design: schema design choices, abstractions

## Evaluation

### Critique

Summary assessment from user’s perspective

Summary assessment from developer’s perspective

Most and least successful decisions

Priorities for improvement

## Reflection

Most and least successful aspects of project

What I learned from it and can improve on next time

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**Team Work Plan Stakeholders**

List of stakeholders and their roles
<table>
<thead>
<tr>
<th>Team Work</th>
<th>Plan</th>
<th>Stakeholders</th>
<th>List of stakeholders and their roles</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Resources</td>
<td>List of computational, cost and time constraints</td>
<td></td>
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<tr>
<td></td>
<td>Tasks</td>
<td>List of tasks, expected effort, allocation to team members</td>
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<tr>
<td></td>
<td>Risks</td>
<td>Enumeration of expected risks and their mitigations</td>
<td></td>
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<tr>
<td></td>
<td>Minimum viable product</td>
<td>Identification of minimum viable product for first release</td>
<td></td>
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<tr>
<td>Team contract</td>
<td>Team contract</td>
<td>Expected level of achievement and effort for each team member</td>
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<tr>
<td></td>
<td></td>
<td>Personal goals for each team member</td>
<td></td>
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<tr>
<td>Meetings</td>
<td>Agenda</td>
<td>One agenda for each meeting</td>
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<tr>
<td></td>
<td>Progress report</td>
<td>Agenda prepared in advance of meeting</td>
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<tr>
<td></td>
<td></td>
<td>One report for each meeting, prepared in advance</td>
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<tr>
<td></td>
<td></td>
<td>Summarizes progress since previous meeting</td>
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<td></td>
<td></td>
<td>Identifies achieved and missed milestones</td>
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<td></td>
<td></td>
<td>Identifies difficulties encountered</td>
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<tr>
<td></td>
<td>Meeting minutes</td>
<td>Identifies changes found in problem or constraints</td>
<td></td>
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<tr>
<td>Reflection</td>
<td>Peer review</td>
<td>Summary of discussions and advice from mentor</td>
<td></td>
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<tr>
<td></td>
<td>Evaluation</td>
<td>Summary of new decisions</td>
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<tr>
<td></td>
<td>Lessons learned</td>
<td>Changes to plan or milestones</td>
<td></td>
</tr>
</tbody>
</table>

cool new part: team work!
team contract

not grunt work
› real opportunity to prevent disaster
› so use it!

team member expectations
› all want A+ in 6170 and transition project to startup
› all happy to scrape by with a C and enjoy the weather

what we’ll do if...
› we disagree
› someone slacks off
weekly meetings with TA mentors

all team members must attend
› missing meetings will affect your grade
› and seriously annoy your team mates

TA mentors are consultants
› they won’t direct the meeting
› your job to make it useful

must prepare in advance
› agenda for meeting
› progress report: good and bad

must record meeting
› brief but concise minutes
› focus on key decisions and assignments
presentation schedule

initial project pitch
› Weds April 17, in class

demo of minimal viable product (MVP)
› Mon April 29, in class

demo of final product at project fair
› Weds May 8, in class
initial pitch contents

purpose, goals, context
› WHY?

key concepts, features, challenges
› WHAT?

risks and their mitigations
› HOW?