Project Overview

CS 272 Software Development

Professor Sophie Engle
Department of Computer Science

Search Engine Components

- Process **text files** into consistent form }1
- Build a **data structure** that supports search }1
- Implement **search algorithms** through data structure }2
- Switch to **multithreaded** building and searching }3
- Process **web pages** into consistent form }4
- Create **web server** and front-end }5

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#	Project	Assignments	Reviews
1	Index	v1.0 Tests/Review, v1.1 Tests/Review, v1.x Design	4 – 5
2	Search	v2.0 Tests/Review, v2.1 Tests/Review, v2.x Design	3 – 4
3	Thread	v3.0 Tests/Review, v3.1 Tests/Review, v3.x Design*	2 – 3
4	Crawl	v4.0 Tests, v4.1 Tests (No Review or Design)	0
5	Server	v5.0 Demo/Review, v5.0 Design**	1

**Graded during finals week during a special code review (instead of a final exam)

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v	Project Description	Grading
v1.0	Build counts from stemmed text files	Build Count Tests, Code Review
v1.1	Build inverted index from stemmed text files	Build Index Tests, Code Review, v1.x Design
v2.0	Exact search through inverted index	Search Exact Tests, Code Review
v2.1	Partial search through inverted index	Search Partial Tests, Code Review, v2.x Design
v3.0	Multithreaded building of inverted index	Thread Build Tests, Code Review
v3.1	Multithreaded searching of inverted index	Thread Search Tests, Code Review, v3.x Design
v4.0	Build inverted index from single web page	Html Build Tests (No Code Review)
v4.1	Build inverted index from crawling web	Html Crawl Tests (No Code Review)
v5.0	Search engine web server	User Demo/Tests, Code Review/Design

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Test Grades

- Earned when pass 100% of tests on GitHub Actions

- Lose 2 points per 24 hours

- Must also pass tests before every code review!

Review Grades

- Earned when <u>attend</u> a code review with the instructor

- Lose 2 points per 24 hours

- Late penalty includes weekends!

Code Reviews

- One-on-one appointments with instructor via Zoom
  - Local recording is allowed; in person on request
  - First 2 reviews are 20 minutes, all others 10 minutes

- Cover as much as possible in appointment

- Will be given improvements to make to the code design

- Should plan on up to 1 code review per week

You are not guaranteed a code review every week if you do not sign up early in the week!

Design Grades

- Must fully pass the code review process
  - Instructor will tell you when you reach this mark
  - Usually takes **2 to 5 code reviews** per project

- Must create "final release" of project that passes the tests, style checks, and fixes the last TODO comments

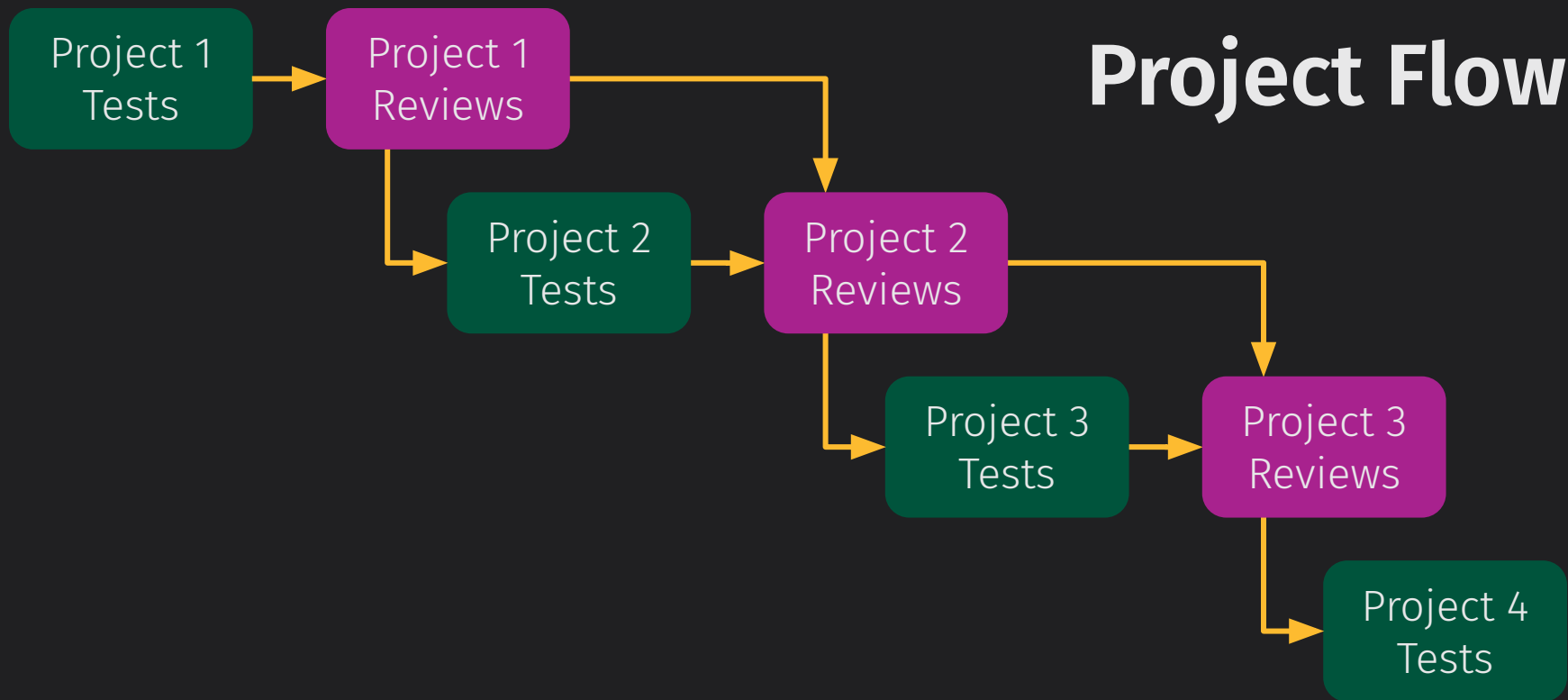- Prerequisite to starting code reviews for next project

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Project Rules

- Can work up to 1 project ahead <u>after</u> first code review
  - *Can start project 2 tests after first project 1 review*

- Must pass tests and style checks before code reviews

- Must pass design of previous project before starting code reviews for next project
  - *Cannot start project 2 review until done with project 1*

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Project Flow

Project 1 Tests → Project 1 Reviews → Project 2 Tests → Project 2 Reviews → Project 3 Tests → Project 3 Reviews → Project 4 Tests

Abbreviated view... each project has 2x test checkpoints

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Week	Tests	Review	Design	Notes
2				
3	v1.0			
4	v1.1	v1.0		
5		v1.1		
6			v1.x	
7	v2.0			Exam 1
8			Spring Break	
9	v2.1	v2.0		

Week	Tests	Review	Design	Notes
10		v2.1		
11	v3.0		v2.x	Cutoff
12	v3.1	v3.0		
13		v3.1		
14			v3.x	
15	v4.0			Exam 2
16		v4.1		
FN		v5.0		Finals Week

Questions?

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