Syllabus and Projects

CSCI 4448/5448: Object-Oriented Analysis & Design

Lecture 3

Learning Objectives

- Students will be able to…
- Understand the class mechanics
- Consider the class projects

Your Class Staff

Manjunath Nagaraja Rao

Teaching Assistant (x3)

Neethi Shetty

Class Manager (x3)

Anirudh Rathore

Class Support Staff (x2)

The Class Staff are here for you. You can ask them questions about anything class related, ask for help in the labs, etc. Don’t hesitate to reach out if you need a hand.

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Projects – General

- Most projects in OOAD are intended to be done by two to three person teams. You can go solo if you'd rather, but I recommend having teammates.
  - Forming your team is up to you (use Slack!)
  - Teams may only be one, two, or three people – not 4, 5 is right out
- All projects in PES will require:
  - A Github source repository for code and readme documentation
    - We'll review Git in class if you're new to it
  - Possibly a demonstration to me or the class staff
  - Depending on the project, there may be more or other deliverables to submit

Projects – Specific (subject to change)

1. OO definitions, Git, programming exercises – Java – 50 Points
2. UML exercises, programming exercises – Java – 75 Points
3. OO program – Java – 75 Points
4. Semester Project – Design – 125 Points
5. Semester Project – Interim Report, Demonstration – 50 Points
6. Semester Project – Final Report, Demonstration – 125 Points

Projects – Semester Project

The semester project subject for development is largely up to you and your team. It can be a web app, a mobile app, a game, a utility, a cloud-based application, an IoT device or system, etc.

Content is somewhat negotiable, but generally I'm looking for:

- Any OO language (or a non-OO language used in a clearly OO style, like C for instance)
- (G)UI development
- Data storage
- OO Pattern applications

If you would like to try to create a device or system of devices, I can provide single board computers or microprocessors (Raspberry Pi, Beaglebone, Arduino, etc.)

Also consider leveraging cloud elements from AWS, Google, or Azure – student accounts are available

More details and discussion as we move into the semester…

Graduate Research Project

For graduate (CSCI 5448) students only:

- Solo or with a two person team, you will research or review OO- or pattern-related topics
- You will select the format
  - Presentation (40 slide minimum)
  - Research paper (~4000 words)
  - Software project with illustrative documentation
  - An illustrative website
  - Other proposals? (Podcast? Zine? etc.)
- The topic could include a language review, language comparisons, patterns reviews, object-oriented methods or principles, OO or other pattern libraries (web, architectural, etc.), or related book reviews
- I am fairly open on the content of the submission if you have an area of interest or research you like, although topics must be reviewed and approved, and you cannot directly duplicate submissions for other classes
- More details will be presented in future classes

Graduate Research Project

A total of 250 points are available (plus extra credit for quality)

Deliverables will include:

- Topic submission (20 points)
- Topic review (of another team – peer review) (20 points)
- Initial draft (50 points)
- Final draft (120 points)
- Pecha Kucha timed presentation (20 slides @ 20 seconds each) for the class (40 points)

Other Work/Points

- Quizzes (100 points)
  - Ten 10-point Quizzes over the semester (on Canvas) – you'll have 5 or 6 days to do them – usually 5 to 10 multiple answer or T/F questions – two attempts – keep highest grade
- Participation/Attendance:
  - I will use Menti about once a week to do an attendance check, often as part of an in class exercise (which usually happens on Fridays)
  - I will check attendance at a minimum 15 times this way
  - Distance students (only) can submit an article review for participation credit about a class topic (with URL and a paragraph of discussion) on Piazza (should include the hashtag #participation) – each review is worth 3 attendance check-ins

Attendance		
Number of check-ins	Points	Distance Student Articles
15/14/13	100	5
12/11	95	
10/9	90	4
8/7	80	3
6/5	70	
4/3	60	2
2/1	50	1
0	0	0

Syllabus

You can find the Syllabus on the class Canvas site under Files, Class Files

I’m going to walk you through the highlights, lets review it together…

Next Steps

- If you're staying in the class (which of course you should!)…
- Make sure you sign up for Piazza and Canvas notifications
- Get the Head First Patterns book
- If your Java skills are somewhat weak, you might want to review some tutorials… (I'll post suggestions)
- Start thinking about your 1-3 person team for class projects and (grad students) your 1-2 person team for the research project
- In upcoming classes, more OO elements and review to set the stage for starting pattern reviews
  - My goal is to get into the most important patterns before you start your semester projects!

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