Assessment

TODO: are there ways to improve a grade?

# Unit Tests (40%)

## What

* Written test
* Mostly multiple choice
* Some short answer
* Some coding

## When

* At the end of each unit
* 5 total

## Goals

* Review of key concepts learned in the unit
* Review of keys terms from the unit
* Review of key skills learned from the unit

## Study resources

* Unit lecture slides (teacher provided)
* Unit lecture notes (teacher provided)
* Exercises from the unit (created by student)

## Resources available during tests

* No laptops or phones
* Investigate this!

# Exercises (25%)

## What

* Assignments to be done on the computer in class

## When

* Most class periods will contain at least one exercise
* Exercises typically follow a lecture introducing a new concept
* Expectation is that student can complete exercises during class time

## Goals

* Give students an activity oriented learning experience for the concepts learned
* Give teachers an early indication of student learning progress for course correction

## Resources

* Exercises are done by students using their laptops
* Exercises are handed in electronically
* Students have full access to laptops and internet
* Students may help each other
* Teachers will be available for questions during exercise (walking around)
* Students may not plagiarize other students, the internet, or books

## Peer review

* For some exercises, students will review other’s work
* Walk around and view (for visual assignments)
* Code review to give feedback on style and correctness

## Rubric

* Exercise is handed in 50%
* Result produces the correct result 40%
* Program follows style guide 10%
* CHANGE THIS!

# Group project (15%)

## What

* Design and development of an interactive web application
* Examples: game, simulation, other
* Target audience for application is the UPrep population
* Group sizes: 5x3 + 1x2 = 6 groups, 17 students

## When

* During 4th unit
* UPrep population will be encouraged to try out the result

## Goals

* Understanding your target customer and interviewing
* To encourage creative design and brainstorming
* To encourage creative problem solving
* To experience working in a collaborative software environment
* To experience working on a larger project
* To be part of something you are proud of
* To increase interest in CS among the rest of the UPrep population
* To experience of assembling pieces of software
* To experience in collaborating on problem solving
* To experience in controlling project scope and feature “creep”
* To experience in producing high-quality code
* To experience changing requirements and how to deal with them

## Rubric

* 2 two-week “sprints” (agile software development)
  + Set out a goal for each sprint, get something working as soon as possible, evolve it
  + Show progress to the class at the end of each sprint?
  + Rinse and repeat, adding more features
* Teachers will interview group members at the end of each sprint
  + What parts did each of you work on this sprint?
  + What are you going to do next sprint?
  + How would you change your solution to do X? Students should be able to walk through what would need to change.
  + Teacher will try to use the software in its current form
  + Teacher will make a copy of the current form of the software for analysis
  + Teacher will request a change to the project
* Teachers will assess progress based on interview and analysis of code:
  + Is the project scope appropriate?
  + Does the project follow the style guidelines?
  + To what degree did project use unit, integration, and regression testing?
  + Does the project have good quality?
  + Does the project have good performance?
  + Are the goals of the project clear?
  + Do the team members understand how the code in the project works?
  + Was the team able to respond to the teacher’s request for a change?

# Individual report (5%)

## What

* Interview someone that works in computer science
* Prepare a 5-minute presentation for the class on what you learned

## When

* Each week one student will present
* Ordering is randomly chosen

## Goal

* Students get a better feeling for what computer science is
* Class wide goal of understanding the diversity of computer science
* Students map their individual to a particular area of computer science

## Resources

* Interviewee

## Rubric

* Did you identify what specialization the person was part of
* Did you clearly explain what the person does in a way that you understand
  + Follow up questions until you understand
* How well did you answer questions from the class
* Show the persons work (digital artifact)
* What is a challenge or unanswered question that the person is thinking about

# Final (15%)

* Goal
  + Write a reflection that relates the other parts of the course
* Connect to group project
* TODO:
  + Javascript vs. Java?
  + Given that unit 5 will have a unit test, should we even have a final?

# Journal (not part of assessment)

## What

* Digital record of all assignments and projects (think: folder)
* Question? Can schoology be the journal and submitting?

## When

* Throughout the course keep a copy of what they have done

## Goal

* This will allow them to reflect back on the course about what they have learned