COS126: Final Project Proposal Template

Fall 2022

Instructions: Make a copy of this Google doc and respond to all required questions. Then, download this Google doc as a PDF and change its name to `proposal.pdf`. Finally, upload `proposal.pdf` to [TigerFile](#).

Required questions are **bolded**; however, we highly recommend you answer all questions as they will help you better plan for your project. If you plan to use external sources (e.g., datasets, libraries, algorithms), please fill out the relevant sections under "External Sources".

Given the time-sensitive nature of approving proposals, late proposals will not be accepted for a grade.

1. Basic Information

Name #1:
NetID #1:
How would you (member #1) self-describe your comfort level with regards to programming?
( ) Less comfortable
(X) Somewhat comfortable
( ) More comfortable

Name #2:
NetID #2:
How would you (member #2) self-describe your comfort level with regards to programming?
( ) Less comfortable
( ) Somewhat comfortable
( ) More comfortable

2. Proposal Meeting Selection

***Before moving on**, sign up for a 10-min appointment for your proposal review meeting here ([sign up link](#)). Everyone in your group must attend this meeting, so choose a time that works for all group members. We recommend you choose a preceptor of one of your group members, but this is not a requirement. The preceptor you choose to meet with will be your designated project advisor.*

When and where is your proposal review meeting (e.g. Tue, Nov 29 at 3pm)?
Monday, November 28 at 9:30 am over Zoom

Which preceptor did you schedule a meeting with?
John Yang

3. Project Description

What is your tentative project title?
Chess Game Simulator

Please summarize your project in 1 paragraph.
My project will simulate a game of chess using a file with the moves as input. It will take in a text file with a game of chess in PGN format, which starts with the pieces in their starting position and shows the moves step by step. My program will play each move step by step until one side wins or there is a draw.

Why did you choose this project idea and what do you hope to learn with it?
I enjoy playing chess and solving puzzles, so I thought it would be fun to implement a puzzles program in Java.

4. Features and Project Requirements

If approved, the three features you outline in your proposal are binding; any changes to them must be approved by your project advisor. When describing each feature, try to be as specific as possible.

Feature #1: PGN Reader
In 2-3 sentences, please describe your feature.
Reads a PGN file and translates each move to

In 1-2 sentences, please describe how you plan to implement your feature (e.g., is it going to be a class, a collection of methods, a single method, …).
It will be a collection of methods

In 1-2 sentences, please describe how you plan to test your feature.
Reading in just one move and see if the printed output or the output to StdDraw is correct

How would you best categorize your feature using the buckets paradigm? (choose one)

(X) Standard
( ) Sprinkle
( ) Sparkle

Explain in 1-2 sentences why you think it fits the chosen bucket.
I don't think I will have to use anything outside of the scope of this course to implement this method

Feature #2: Chess Board
In 2-3 sentences, please describe your feature.
Makes the chess board and includes methods to place and move pieces

In 1-2 sentences, please describe how you plan to implement your feature (e.g., is it going to be a class, a collection of methods, a single method, ...).
It will be a collection of methods, that include setting up the initial position of the board, as well as moving and capturing pieces

In 1-2 sentences, please describe how you plan to test your feature.
I will test it using single commands such as a single move and see if the output to StdDraw is correct

How would you best categorize your feature using the buckets paradigm? (choose one)
() Standard
(X) Sprinkle
( ) Sparkle

Explain in 1-2 sentences why you think it fits the chosen bucket.
I will have to implement a board class that creates each box of the board as well as it's fill color, which I think is in the sparkle bucket

Feature #3: Game Player
In 2-3 sentences, please describe your feature.
Plays the game by reading each move and moving the pieces.

In 1-2 sentences, please describe how you plan to implement your feature (e.g., is it going to be a class, a collection of methods, a single method, ...).

It will be a class because I also want to include some extra features that show things such as the pieces captured and material advantage.

In 1-2 sentences, please describe how you plan to test your feature.
Same as the other two features.

How would you best categorize your feature using the buckets paradigm? (choose one)
(X) Standard
( ) Sprinkle
( ) Sparkle

Explain in 1-2 sentences why you think it fits the chosen bucket.
I don't think this feature will require anything that goes beyond this course

Other requirements:
How will your project accept user input?
In the command line as a file

How will your project produce output?
In StdDraw

Describe the .java files you plan to write. Describe the purpose and functionality of each .java file.
PGN.java which is the feature that reads and translates PGN
Board.java which is the API for the board
Chess.java which is the API for setting up the pieces and moving and capturing
Game.java which plays the actual game

In 1 short paragraph describe what functionality you would add to your project if you could continue to work on the project for one extra month. (you won't have to implement any of this)
Something that would be cool to add would be an evaluation bar which analyzes who has the advantage in a certain position. I would also add a feature where you can play the game of chess instead of it just being a replay of a past game. Finally, I would add a puzzles feature, which is a popular way of improving chess tactics, where someone is given a position and needs to find the best move or sequence of moves to gain the most advantage.

5. External Sources

Answer the relevant questions if you plan to use any external resources. This section is not binding and is mainly for you and your project advisor to be informed about the kinds of sources you will be using (e.g., you can use additional sources, use different datasets or libraries, etc.) That said, if you want to make a major design shift (which likely would include changes to datasets/libraries/algorithms), it must be approved by your project preceptor.

Which datasets (if any) you plan to use in your project (please include links).
N/A

Describe which libraries (if any) you plan to use in your project (please include links).

Describe which algorithms (if any) you plan to use in your project (please include links or references).

List any other external sources (if any) you expect to use in your project (please include links or references).

6. Questions and Extra Contest

Describe any questions you have and would like to discuss with your project advisor during your 10-min project review meeting.

Describe any extra information about your project you would like to share with your project advisor before your 10-min project review meeting.