theRessistance

APCS1 pd 08
2018-01-04

Final Project Proposal

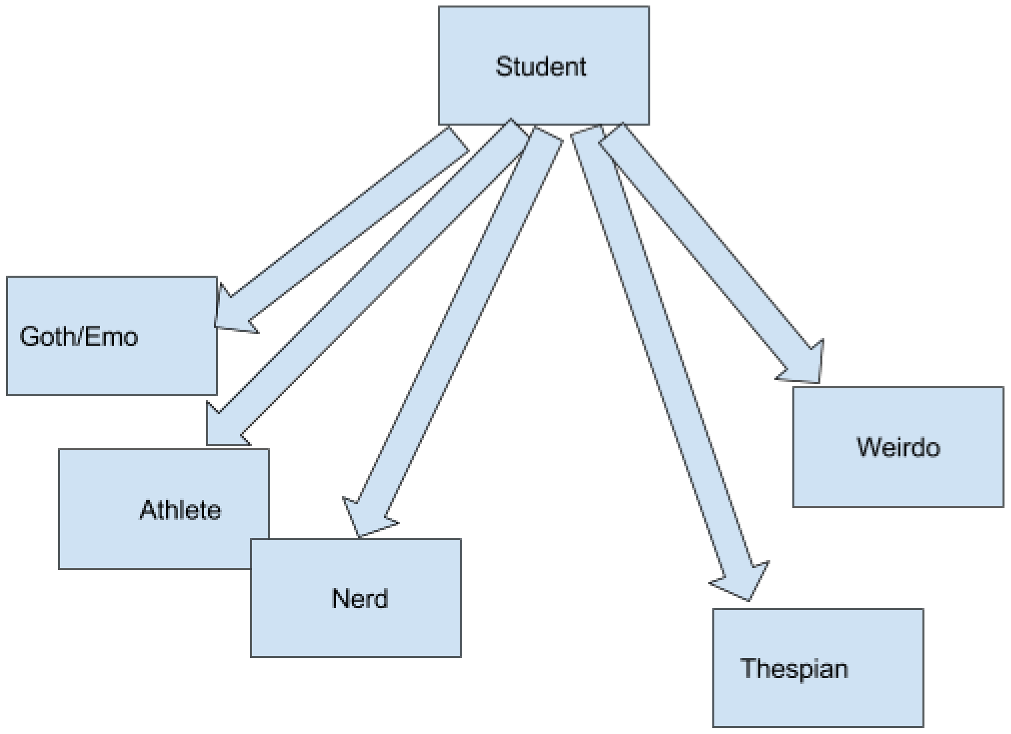
High School 2.0

We will endeavor to create a role-playing, text-based game in which we redefine social classes in the worst place in existence- high school. In the first stage of the game, each player is sorted into a certain “type” of person based on their reactions to a multiple-choice quiz. These “types” would be based off of typical high school characters as defined by pop culture (ie. Mean Girls; High School Musical; etc).

Types of Students:

- Athlete
- Nerd
- Thespian
- Goth
- Weirdo

Inheritance Tree:



- Uses the concepts of polymorphism and inheritance.

- Scenarios would be pre-determined and chosen randomly during game-play from an array that stores possibilities.

Student attributes:
- Friend Count
- Mental health
- Popularity (in their own sphere/ type of student)*
- Physical health
- Intelligence
- Score (calculated by taking into account each of the other attributes// will be used to compare to other players)*
- Social Status (this is used to determine the chances of being invited or accepted to certain social gatherings)

* Both score and popularity start at 0. Popularity (like other attributes) is either gained or lost based on the user's decisions. Score calculated when game-play ends.

Athlete:
- High physical health
- Low intelligence
- High friend count
- Average mental health
- High Social Status

Nerd:
- Low physical health
- High intelligence
- Average friend count
- High mental health
- Low Social Status

* nerd specific responses may impart high popularity points

Goth:
- Low physical health
- Average intelligence
- High friend count
- Low mental health
- Average social status

* goth specific responses may impart high popularity points

Thespian:
- Average physical health

- Average intelligence
- High friend count
- Average mental health
- High Social Status

* it is harder to achieve popularity points as a thespian

Weirdo:
- Average physical health
- Average intelligence
- Low friend count
- Low mental health
- Low Social Status

* weirdo specific responses allow for dramatic climbs in all attributes

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After initializing the player's character, gameplay begins. The game would proceed over the course of 7 days (starting on a Sunday and ending on a Saturday of a regular school week).

- Turns would consist of the user responding to randomly generated scenarios. The user's responses trigger methods that mutate attribute values based on the player's type of student. Some responses may also trigger mini-games. Scores resulting from mini-games may contribute popularity points.
- Scenario lists and corresponding responses are specific to each persona. These are stored in 2D arrays, one for each day. The indices of the responses would correspond to which attributes are mutated.
- Game ends when a) mental health or physical health drop to 0 or b) end of 7th day reached.
- Minigames can be triggered when any one of the attributes falls below a dangerous level. Popularity boosting opportunities are random. Games may include 1) A guessing game similar to HW 48, 2) A game involving 2D array functionality, 3) A game of chance based on Slots.java. These would be called by a Minigame wrapper class that makes minor changes to fit the game's theme.
- At end of gameplay, score is calculated using all of the attributes.

Possible scenarios (still under consideration):
- Party in midtown
- Sleepover
- Studying
- Choosing to go to school
- Talent shows
- Educational competition
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- Relationships
- Bullying

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Prioritized to do list:

- Create superclass Student, and subsequent (6) subclasses.
- Compose a driver class file that will be helpful in testing functionality of other classes.
- Work on developing core methods of Student and achieving functionality.
- Review previous homeworks (like YoRPG) in order to understand the structure of a driver class file.
- (Test incrementally.) ← important at all stages!
- After achieving a working version, look to stretch with work with csv files and file reading.

Timeline:

(~2 days)

1) Review driver files, and solidify understanding on abstract methods and polymorphism.
2) Set up working class files for all super/sub classes and Woo.java.

(~4 days)

3) Work on defining abstract methods in class Student.
4) Work on driver file to be able to test newly written methods.
5) Start working on each superclass at a time. Creative work to develop scenarios and responses; how each response affects

(~2 days)

6) Incorporate mini-games/ aspects to make user experience more entertaining

(~4 days until submission)

7) Finish driver file
8) Robustify code.
9) Explore csv files and file reading.
10) Implement high score storage system.
11) Test, test, test.
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