Final Project Proposal
Kingdom Quest

Our project is a terminal questing game in which the character will receive quests throughout the game.The adventure begins in the "castle".

CHARACTER FEATURES
- Select a character
- Select a weapon.
    - This "weapon" will simply modify the player's attack stat.
    - Does not directly attack monsters (will explain later on).
- Assign name.
- All of this will use keyboard input by the player.

For characters, we may divide into categories similarly to the way we did for YoRPG in which they will all be from the same superclass:
- Soldier
- Swordsman
- Mage

Depending on class and weapon, stats will be influenced:
- Speed
    - Speed will be used to determine who attacks first.
- Attack
    - Attack will be used to determine the range in which the damage is.
- Defense
    - Depending on the defense, the damage inflicted by the monster may be reduced.
- Health
    - Used to keep track of damage.
- Special Attack
    - Similar to regular attack but may be stronger.
*All stats may be modified through items.

Inventory is also available to the player.
- Depending on the chosen character class, inventory may vary.
- The inventory will be formatted as a 2D array.

- Sorts will be used to organize items.
    - For example, it will be used to group certain items together, such as potions.
- The amount of items carried may affect speed stat.
    - If items in inventory > a certain amount, speed will decrease by a certain amount.

CASTLE FEATURES

Within the castle, we will create a healing center.
- When you are in castle, there will be a selection asking if you want to heal.
- If you select yes, your health stat will increase to its maximum value.

Within the castle, there will also be a shop.
- In this shop, the character may purchase items.
- The shop will be formated in a 2D array (similar to inventory; we will talk more about this in a bit).
- Sorting will be used to organize the store.
- When certain items are purchased, money will be subtracted from your character.
    - Money will simply be an instance variable.
- Money may be obtained through mob drop.

LEVELING UP/PROMOTION

As the game processes, the character may obtain experience points from defeating monsters.
- Through these experience points, the player is able to be promoted.
- After the character is promoted, it is still within the same subclass. It is not being placed into another class.
    - For example, if a private levels up to Specialist, he is still in class private.
    - However, we will make it so terminal displays the string "specialist" instead.
- Within the class private, and other classes, we will have if statements saying if the player has a certain amount of experience points, their stats will be in a certain number range.

QUESTS/MONSTERS

- Monsters will be formatted similarly to characters.
    - Each type of monster will be part of a superclass Monster.
        - Gargoyles
        - Cyclops
        - Trolls
        - Goblins
    - These monsters will have designated stats and levels.

- However, unlike the character that you control, monsters are unable to carry weapons or use items.
- When defeating monsters, items may be dropped along with money.
  - Item drop will be determined using Math.random().
  - Money will always be dropped every each defeated monster.
- Each quest will be part of the same superclass.
  - Each quest location will be a subclass.
    - Abstract methods such as spawn rate will be created so each quest share a similar format.
    - Waterfall
    - Dungeon
    - Hell
  - Within each quest, a while/for loop will determine each wave of monsters.
  - Certain quests will only be opened when certain items are equipped or if you have reached a certain level.
  - The type of monsters that spawn within the quest are determined through Math.random().
    - Since some types of monsters may be stronger, they will have a lower chance of being spawned.
  - In between waves, the user may choose to quit the quest.
    - If the user chooses to quit, he/she will not lose any items/money
  - If the user chooses to quit during battle or is beaten by the monster, he/she will lose money and possible items.
  - At the end of each quest, the user will be asked to fight a boss.
  - As long as a quest is unlocked, the user may replay the quest as many times as they desire.

TRAINING
- The player may enter "forest" to fight low level monsters to gain experience points, items and/or money.
- Since this is not a quest, the user may choose to quit whenever he/she feels like so.
- The forest will be created within the driver.

AFTER DEFEATING ALL QUESTS
After all quests are complete, the user will be able to enter an endless mode.
- This endless mode will be part of the driver.
- A boolean will be set to true, when the player's health is above 0.

- When it is true, monsters will spawn one at a time for the player to fight with a while loop.
- Once the health is below 0, the boolean will become false, and the while loop stops.
- Since this is simply for high score, the player will not lose items/money when dying here.
- This is similar to the forest, however the user may not quit whenever he/she feels like it.

CONCLUSION
- Essentially we have a hierarchy of classes for character, a hierarchy of classes for monster, and a hierarchy of classes for quest. Through the use of a driver, we will be able to put everything together.