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# Tenjin Math

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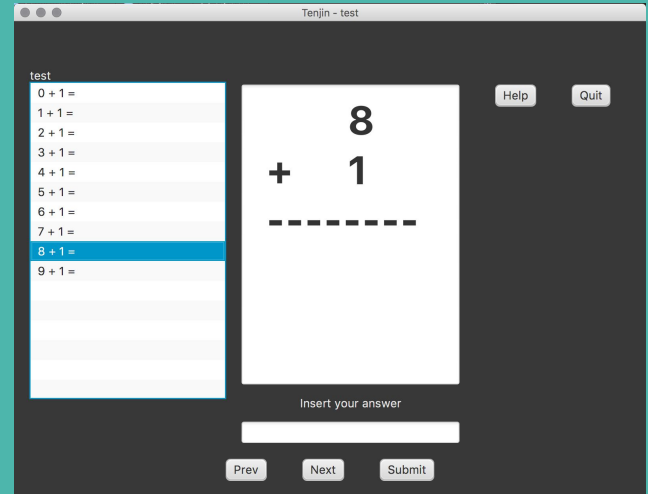
# Our Project



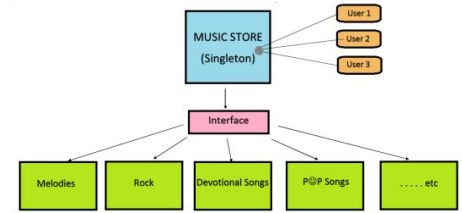
Interactive program focusing on learning basic math skills with mathematical flashcards and workbooks.

# DEMO TIME!!

Demo Link: <http://screencast.com/t/lUKbzoxb>



# Design Patterns



- *Factory*

- “Used to replace class constructors, by creating an abstraction through which one of several classes is returned determined at run-time.”
- Why: Used for loading a module based on the user selection

- *Strategy*

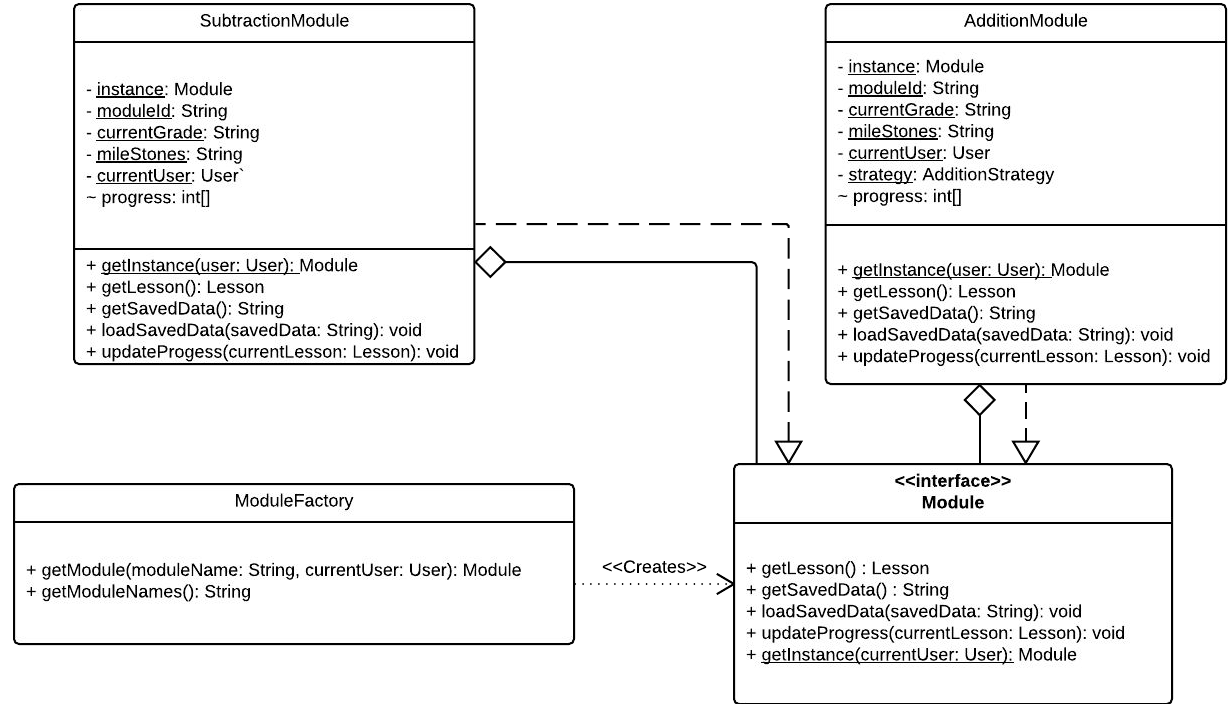
- “Enables an algorithm's behavior to be selected at runtime.”
- Why: Used for building the lesson based off the user’s grade progress

- *Singleton*

- “Restricts the instantiation of a class to one object.” useful when needing only one object to coordinate actions for whole system
- Why: Used to make sure only 1 module was instantiated once for users

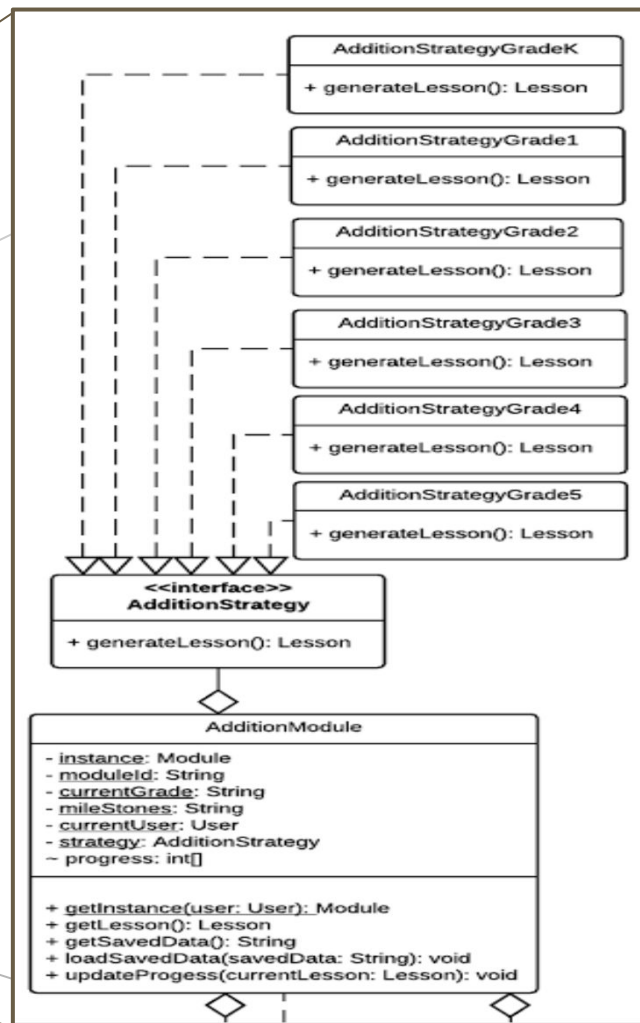
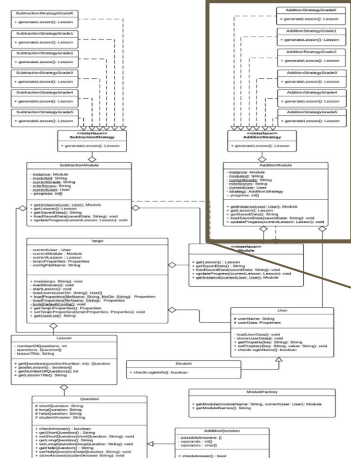
# Class Diagram I

## Factory Design Pattern



# Class Diagram II

## Strategy Design Pattern



# BE interested....

- PRE-design, Diagrams, Design Patterns - Created ease of coding
- Class Diagram: most helpful
  - Helped with coding it out since it was more like fitting puzzle pieces together rather than making the pieces then trying to see if they will fit together
  - Didn't have class diagram for JavaFX
    - created a more difficult task to complete front end
    - More time consumption
    - More trial-and-error coding practices

# References & Credits

- [https://play.google.com/store/apps/details?id=appinventor.ai\\_coolbhavaa1.mathcard\\_1](https://play.google.com/store/apps/details?id=appinventor.ai_coolbhavaa1.mathcard_1)
- <http://danruizmath115.weebly.com/workbook.html>
- [https://en.wikipedia.org/wiki/Singleton\\_pattern](https://en.wikipedia.org/wiki/Singleton_pattern)
- <http://www.w3programmers.com/category/php-design-patterns/>
- Thank you to Professor Boese and teammates.

TENJIN USE CASE OVERVIEW

