CS3217 Problem Set 3

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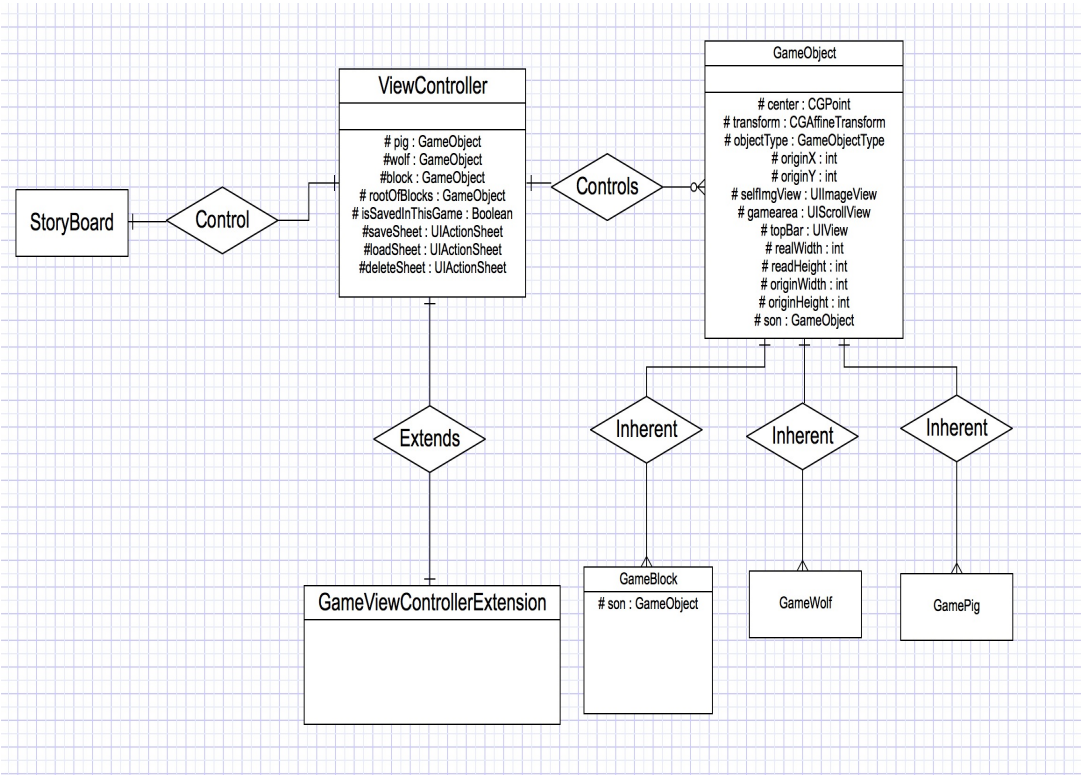
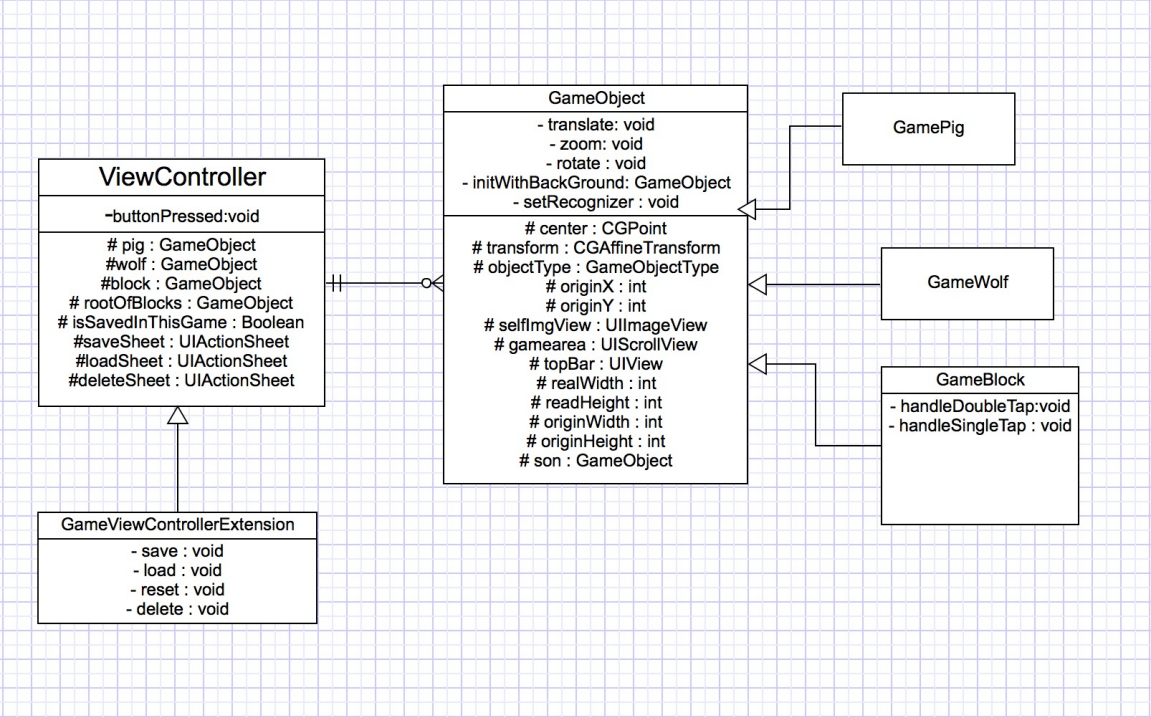
Problem2: Explain Your Desgin

Question a.
Answer :

1) Entity Diagram




2) Class Diagram




As we can see here, model is GameObject which has the center CGPoint , transform and ObjectType of the view.
Controller is the view controller, and View is the storyboard.

Storyboard gets the user action to tell view controller and view controller change the state of the model. Hence, There is no directly connection between storyboard and model, which fits MVC pattern.

Hence, when the program starts, three objects (wolf, pig, and block) are initialized in the palette, and all gesture recognizers are added to the views after initialization.

Question b.

At first, I tried to put all my codes in View Controller, since it's easy for me to handle gesture recognizers and translate, rotate, zoom, tap methods. Also all properties can be used conveniently in one class. However, I find out MVC pattern is much more elegant than my original design, since all codes are divided into three parts clearly. Although I feel inconvenient sometimes when I need to pass message between different classes, I don't need to think about my codes too much, since each part is only responsible for specified functions. It's easy for me to edit and find out the structure of the whole project. Hence, I choose to use MVC.

Question c.

Create a new subclass projectile.

And, create a new project named “projectile” in view controller. And set recognizer to it. When a user touches the wolf it shows, and when it hits a block or pig it disappears.

Question d.

Maybe using NStimer to check the state of object in a short period of time, and to check whether they are overlapped by using problem set one’s function. If they are overlapped, then we can define our following action.

By using delegate in view controller should work well.

Question e.

Set bounds for the gamearea, since a gameobject should not below the ground. We can add the code in the translate method by detecting the view center.

Multiple pigs for this game, we only need to extend the number of views of pig. Add a view array in the GamePig class.

Problem 4.

In this problem set, I use property list to restore all characters. Since it’s easy to store one object’s information in an NSArray and we can put these arrays to a dictionary quickly. And we can get the information out quickly by using key we made for each object.

NScoding is actually similar to property list. However, we don’t have too many properties for each object to encode, so I don’t choose this one.

Since we only need to store small amount of data, it’s not necessary for us to use SQlite and Core Data.

For manual encoding, since we still need to explore this problem in problem set 5, many change may be added to this method, hence I don’t choose this way.

Problem 5

-Test implementation of palette objects

a) Drag a wolf/pig/block 3 times within palette

b) Randomly drag wolf/pig/block within palette

c) Drag a wolf/pig/wolf outside palette

- Test implementation of reset

    a)Press reset, should see gamearea being reseted, wolf/pig are restored to palette

    b)Press reset twice

- Test implementation of wolf/ pig

    a) drag a wolf

    b) dragapig

    c) reset

    d) drag a pig

    e) drag a wolf

- perform random combinations of gestures on pig and wolf dragged

    a) drag a wolf/pig outside the gamearea

    b) reset and redrag...

- Test implementation of block

  Other than test for wolf/pig above, we test for single tap change block

    a)Tap once

    b)Tap once

    c)Tap twice

    d)Add one more

    e)Tap twice

- Test implementation of save/load

  Insert save and load on testing above

Bonus Question :

a) ……hehe, cannot remember……at least 40 hours.

b) Know more java APIs, should learn Objective-C when I was born

c) should tell us ARC will release a object from other class and cause the recognizer point to a null pointer……. Spend too much time on debugging this problem.