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**Work in Progress Report 4**

**Major developments/breakthroughs(reference specific code please):**

* restructured how objects in the game are moved (now using arrays of objects, instead of rectangles)(Main.java\*)
* separated spaceship and aliens into individual objects that uses constructors (Spaceship.java & Alien.java)
* movement by tilt and arrow key is now functional (Spaceship.java)
* created the main menu and its buttons in photoshop (just .pngs - no functionality)
* fixed the teleportation issue in regards to user input with the spaceship

**Major Challenges/setbacks (reference specific code please):**

* hit detection is not consistent (due to bug/bad code)
* method of moving objects is inefficient (according to Weihan)
* the “fix” to the teleportation issue is not foolproof (spaceship can be lost if going too fast)

**Any modifications to your specifications/release schedule:**

Liquidate 1.1 - “Adding in the option of controlling the spaceship by tilt rather than finger movement**”** has now been bumped up in the schedule to Awakening 1.7

**Description of your scratch/test program:**

**Describe the generic concept you needed to test out:**

ScratchAlienArray\_NoRect

* putting objects into separate classes & moving sprites without usage of rectangles

ScratchScreenChange:

* how to change between different screens

**Source any web site/book that helped you with that concept:**

ScratchAlienArray\_NoRect

* Matt Brock helped out

ScratchScreenChange:

* <https://code.google.com/p/libgdx-users/wiki/ScreenAndGameClasses>

**Describe the code and the lesson that you learned from it:**

ScratchAlienArray\_NoRect

* using object classes in libgdx
* moving an array of objects (incrementing each object’s position)

ScratchScreenChange

* using the Screen class in libgdx
* how to switch between multiple screens when the user does something (e.g., touch)

**Describe any challenges that you enjoyed in integrating this scratch code into your major project:**

ScratchAlienArray\_NoRect

* finding how to divide/organize code (coherence + efficiency) so that it is applicable to main project

ScratchScreenChange:

* the concepts learned from this scratch program will be implemented at a later date (when creating the menu)