Assignment 5
iPhone Invader (2): Game Visualization

**Project due:** Dec. 8\(^{th}\), 2013. 9:00 AM  
**Group size:** 2 (same as A04)  
**Project presentation:** Dec. 8\(^{th}\), 2014 in the lab

**Description**  
You will continue working with iPhone Invader from the last week by implementing how your game looks. You will use **Sprite Kit** in this assignment.

**Task**  
1. **Basic Space Invader:** Implement basic Space Invader game as you’ve planned last week. At minimal, your game must have these functionalities:
   - Show a textured scene  
   - Show multiple enemy ships moving in a scene  
   - Detects a collision between a bullet and enemy ships  
   - Show a score progress either in text or graphics

2. **Extra:** **Advanced Space Invader:** Include one or more of these elements in your project:
   - **Particle:** Use at least one particle effect, e.g., for a thruster or an explosion  
   - **Parallax:** Add parallax effect between the foreground (cannons and ships) and the background (space)  
   - **Chain reaction:** When an enemy ship explodes, allow remnants of the enemy ships to be moved depending on the angle of the hit, causing other ships to explode.  
   - **Image filters:** Use Core Image filters to change appearance of graphics in your game at run time. For example, blink the screen when the player is close to losing.  
   - **Shaders:** Include a dynamic shaders into your game.  
   - Includes 3D Effects using Scene Kit into your game.

**Part 2: Show**  
Prepare to present what you’ve implemented in the lab.

**Submission**  
No submission required for this part. Prepare to present what you’ve implemented for this part in the lab. Simon will be there to comment about your Sprite Kit usage.

**Looking forward**  
In the final part of your project, you will make your game respond to user’s input. You can prepare by reading **Event Handling Guide for iOS**

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