

Follow the [SE456 Final Project 2016.pdf](#) for details.

Fill this form out with Adobe Reader (DO NOT USE anything else)
Save As [Final Submission YOURNAME.pdf](#) place in perforce folder
11:59 pm CST (midnight) Due Date: 17 March 2016

Final Project: Space Invaders

Student Information

Integrity Policy: All university integrity and class syllabus policies have been followed. I have neither given, nor received, nor have I tolerated others' use of unauthorized aid.

I understand and follow these policies: Yes No

Name:

Date:

Submission details

Code Path:
(Perforce Path)

Changelist Num:
(one to grade)

Verified Build: Yes No
(Do not check unless you did verify)

YouTube Link:
(Please verify sound and quality)

Design Doc Path:
(Perforce Path to PDF)

Design Details

Design Patterns completed and use in your code:

Singleton	Factory	Observer
Flyweight	Proxy	Commander
Iterator	State	Composite or PCSTree
Strategy	Visitor	Object Pools
Memento	Adaptor	Priority Queue

Design Document PDF

Completed and submitted

Video Submitted

Demos each feature
Loud and Clear Sound (Can hear your voice easily)
Large Screen capture for Game Screen
Toggle Bounding Boxes on/off

Game Evaluation

Game Cycling

Select Screens --> Game Screens --> Game Over Screen --> Select Screens

Screens Completed

Select Screen

Game Screen

Game Over Screen

Game Play

Complete at least 2 levels without crashing

Each level progressively harder and faster

Toggling bounding boxes on and off (Demo)

2 Player mode

Player takes turns playing one at a time

Each player's game assets are unique to the player

Number of Aliens, Shield Damage, Score, etc.

Each player plays until they die, then next player plays if they still have lives left.

Once both players die, then go to Game Over screen

Score

High Score being updated

Different points for Aliens, UFOs, etc

Player

Movement

Number of lives

Launch on missile at a time

Collision Verification

Missile vs Shield

Missile vs Alien

Missile hits top of screen

Missile hits UFO

Missile hits Alien Bom

Alien Grid versus each wall

Player Icon - right / left limits

Alien Bomb vs Player
Alien Bomb vs Floor
Alien Bomb vs Shield

Alien Grid

5x11 grid (Squid, Crab, Octopus)
Animation Movement in synchronization with movement
Progressively faster as number of aliens goes down
Music tempo and marching is faster as number of Aliens goes down
Drops different types of bombs (at least 3 different types) from bottom Alien
Explosion Splat when Alien is struck by missile
Explosion Splat when Alien Bomb is hit by missile
Killed Aliens adds points to player's score
Different points for different types of Aliens

UFO

Launches at different random intervals
Moves horizontally from Left or Right side
Drops Bomb
Plays unique Sound when UFO is on screen
Explosion sprite animation when UFO is killed
Killed UFO add points to Player's score

Missile / Bombs

Missile and Bombs can hit and kill each other
Splat animation when Missile and Bombs hit each other
Bombs Dropping (at least 3 different modes)
 Zig Zag
 Dagger
 Straight
One Bomb at a time from each alien column (may have more - thanks Jeremy)

Shields

4 Shields on the Screen
Impedes Missiles or Bombs from traveling through shield
Multiple hits can create holes in shields (demo this)

Graphical noise base Dissolve effects (optional)

Sounds

Audio of Aliens marching, synchronized with animation and movement

Cycles 4 sounds for the alien march sounds

Missile firing sound

Collision (missile hitting object)

Death sound effect

UFO

Sounds overlapping

Additional Material

Anything I should Know:

Additional Features:

Verified Build

- Follow the Piazza procedure on submission
 - There is a thread on how to verify your submission
 - Verify your submission compiles and works at the changelist number.
- Verify that only MINIMUM files are submitted
 - No - *.pdb, *.suo, *.sdf, *.user, *.obj, *.exe, *.log, *.pdb
 - Anything that is generated by the compiler should not be included
 - No - /obj, /bin, /Debug, /Release directories
 - Make sure what's checked in works!
- Typical files project files that are required
 - *.sln, *.csproj,
 - *.cs