Retrospective Write-Up

Team Name:
Py Five

Platform/Language:
Python, Pygame

Team Members:
Ayah Alkhatib, Kyle Curry, Kristi Daigh, Ethan Lefert, and Clare Meyer

Work Division
Since we used Pygame, which none of us were familiar with, we were unsure how to distribute the workload at first. We struggled with how long things might take and had to do some experimentation first. After we were more familiar with Pygame, each team member was assigned a documentation aspect and a coding design aspect to focus on. This ensured that everyone was equally invested in both the planning and development of the project.

Project Challenges
- **Building Based On Game Engine:** It was difficult to transition to using Pygame instead of just python because when we first started building the game we did not think to take advantage of the things that Pygame offered and later had to restructure the game because of it.
- **Understanding The Game Engine:** Understanding Pygame and its functions also were challenging. It is a huge library and it was hard to find out which to use where. The team members had to research and read a lot, to figure out the best way to use them, which took a longer time than it should be.
- **Class Interaction:** It was also challenging to make that many classes work together without overlapping. We first, create some couple of classes, got each of them works alone, and then we found out that we need more classes to control and run everything as it should be. So we have created more classes and made the project works just fine.

Features That Missed the Demo
- **Ship Graphics:** Having the player's ship turn left and right when it moved to the left and to the right
- **Enemy Attacks:** Having the enemies shoot back at the player to make the game more difficult

Future Changes
- **Lives:** Adding health to the player so it is not a one shot kill
- **Levels:** Making the game multi-level so it lasts longer and difficulty increases; possible boss level
- **User Interface:** Adding start and end screens
- **Enemy Groups:** Giving enemies the ability to form groups and attack (as in Gallaga arcade game)
- **Enemy Attacks:** Giving the enemies the ability to shoot randomly
- **Sound Effects:** Adding sound effects and background music

Sources
- Enemy Ship Image: https://opengameart.org/content/spaceship-2d
- Missile Image: https://kenney.nl/assets/space-shooter-extension
- Player Ship Image: https://opengameart.org/content/rocket
- Background Image: https://cdn.cnn.com/cnnnext/dam/assets/150103074330-hubble-space-background-2-full-169.jpg
- Game Engine: PyGame. Retrieved from http://www.pygame.org Original authors: Lenard Lindstrom, Rene Dudfield, Pete Shinners, Nicholas Dudfield, Thomas Kluyver, others

Meeting Log
*see below

MEETING LOG

DATE	LOCATION	TIME PERIOD	MEMBERS PRESENT	TASKS ACCOMPLISHED	NOTES
10/10/2018	Leep2	1:00-2:00PM	All	Setup Panda3D, started documentation, assigned tasks	
10/12/2018	Leep2	8:00-11:00AM	All	Setup PyGame, class diagram collaboration	Working on loading background/objects, adding movement over the weekend
10/15/2018	Virtual	8:00-9:00PM	All	Reevaluating project state with project goals; decision to refactor code to use sprites	
10/17/2018	Eaton	11:30-11:50AM	All	Research on sprite implementation and usage	
10/17/2018	Leep2	12:00-2:00PM	All	Refactoring code to be more extensible; using sprite-like actor class	Finish actor base class as soon as possible so inheriting classes can be built
10/19/2018	Leep2	8:00-10:30AM	Ethan, Kyle, Ayah, Kristi	Addressing project progress concerns; rescaling project goals to basic prototype level	
10/19/2018	Eaton	11:30-11:50AM	Ethan, Kyle, Ayah, Kristi	Planned weekend meeting to complete remaining code and documentation	
10/19/2018	Sphar Lib	12:00-1:00	Ethan, Kyle, Ayah	Got the background and the game elements to be shown	
10/21/2018	Leep2	8:30-11:00PM	Ethan, Kyle, Kristi	Gantt chart completion. Successfully adding movement to actors.	