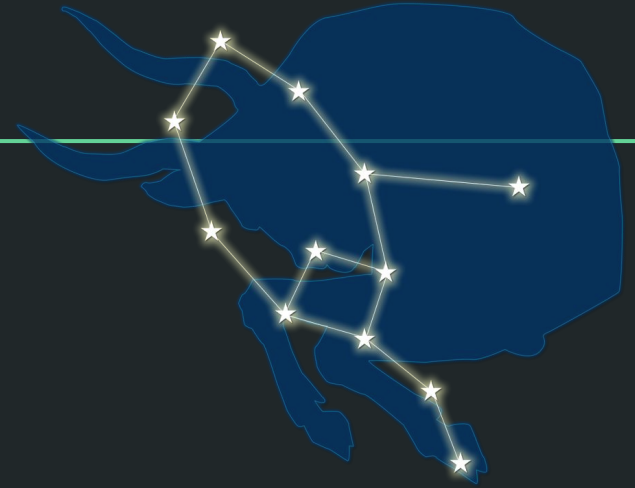# Space Shooter: Taurus
Skills USA - Game Design

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Concept: Space Shooter

The game consists of a simple ship flying on a flat course that spawns enemies, starting from easy and progressing to harder and more waves until a boss stage.

Levels consists of small waves of enemies and an end boss at the end of each one. Each boss will give the player a new ability such as shield and other abilities.

Main mode consists of 10 levels and one for final boss. Endless mode and Boss Gauntlet will unlock afterwards.

Game is pseudo-3d, given models are simple 3D objects but playing field is on 2D boundaries. The background are 3D objects such asteroids and stars as background scenery.

Gameplay Mechanics

<u>Player</u>

Health: The player at the start of each level starts with 100 HP or Hit Points, this can be replenished via minor health drops gained throughout the level. As well as ability healing.

Shield: Similar to health but has a slow over-time recharge, but is weaker in Hit-points then health.

Energy: Regenerating passive ability that allows the player to use boss-dropped power ups to give them an advantage in the battle field.

Player starts with 100 Energy Points *(EP)* that can regenerate over time after used on abilities.

Different Abilities take different amounts of Energy Points *(EP)* depending on their strength.

Gameplay Mechanics

Enemy Types:

Fast: These are small quick moving vehicles that are fast firing but only deal 1 damage to the player's health points. They themselves are 1 hit however so they can be brought down easily but can be deadly in large groups.

Medium: Vehicles that are not too far nor slow and deal 5 damage to the player, these enemy types take 2 hits to destroy.

Slow: Slow moving are hard hitting space-crafts that deal 10 damage to the player and take 3 hits to destroy, however they are fewer in numbers than other enemy types.

Bosses: Each stage has a boss at the end and each boss has their own unique ability, some may have a rapid fire attack that deals very lethal amounts of damage to impenetrable shields. They also are outfitted in unique vehicles that are dealt with differently each encounter.

Image Source: http://bit.ly/2jp7Xy1
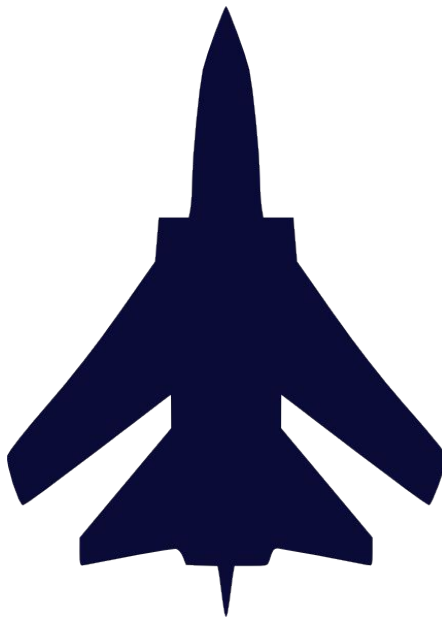
Game-modes

Story: A story mode in which the player fights through several levels encountering waves of enemies until a boss fight. This continues for around 10 levels until the end of the main story mode.

Endless Mode: This mode is unlocked by completing the story mode, this mode allows the player to face progressively harder and harder enemy types as the game progresses and can tally up points by destroying enemy waves.

Boss Gauntlet: Another mode unlocked by beating the main story, this allows the player to start out with all abilities and fighting the bosses with no respawns. Similar to endless mode it has a score in which the player can increase over numerous boss fights.

Image Sources: http://bit.ly/2iD8Qpz & http://bit.ly/2jpraQe

Story Mode

In the Story Mode the Player starts at Tutorial Stage and is allowed to progress through the constellation as a level selection screen.

Each stage is progressively harder and is represented by stage number. Stage are accessible after the previous stage connected to it is complete.

The last stage requires a wormhole key to be accessible. So the player has to defeat the boss within one of the extra stages to obtain the wormhole key.

Once the Story Mode is completed the two locked modes, the Boss Gauntlet and Endless Mode will unlock.
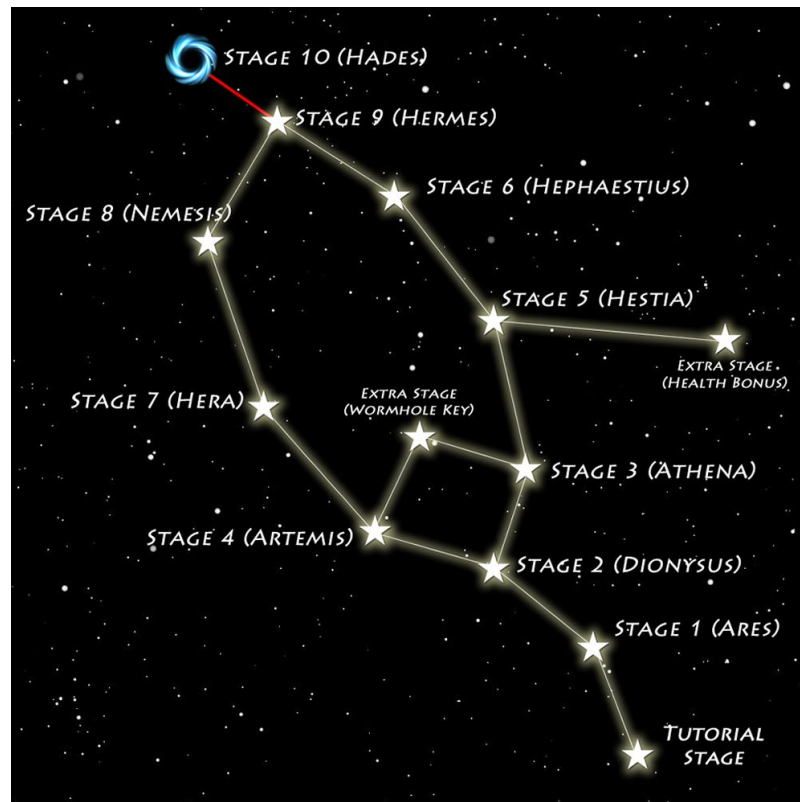
Bosses Abilities

Overview:

At the end of each state a boss will appear and have a unique ability that can be acquired by the player after defeating them.

In order of appearance the abilities are listed from stage number to ability.

Special Exception (Final Boss):

Final Boss Taurus has all abilities of all bosses and when defeated unlocks other game-modes for player.

Boss Name	Ability	Stage #
Ares	Rapid Fire	Stage 1
Dionysus	Teleport	Stage 2
Athena	Regenerating Shield	Stage 3
Artemis	Spread-shot	Stage 4
Hestia	Field Repair	Stage 5
Hephaestus	Arc Shot	Stage 6
Hera	Ward	Stage 7
Nemesis	Explosive Field	Stage 8
Hermes	Speed-boost	Stage 9
Hades	Tracking Rockets	Stage 10

Ability Mechanics

| Ability	Cost (EP)	Type	Description
Arc Shot	40	Offense	Shots chain between energy damaging multiple enemies close together
Explosive Field	80	Defense	Costs health if energy is insufficient and causes an explosion around player that damages enemies.
Field Repair	0	Defense	Heal player over time, but player is stuck in place and health damage stops the repair.
Rapid Fire	10	Offsense	Temporarily increases fire rate to increase bullet outcome.
Regeneration Shield	0	Defense	Converts part of health to regenerating shield and has a 30 second cooldown.
Speed Boost	0	Defense	Allows the player to move quicker than normal and has a 30 second cooldown. (Hold/toggle key to move faster)
Spreadshot	25	Offense	Splits shots into cone in a cone like shape.
Teleport	0	Defense	Teleports player a small distance in the direction they are facing and has a 30 second cooldown
Tracking Shots	60	Offense	Rockets track nearest enemies, or weak spots on boss

Programs: 3D Game Creation

Unity 5 is a Modern 3D application that allows a user to import assets and modify them in order to create a game.

It also allows for us to create scripts in 3 languages, those languages being Unity-Javascript, C#, Boo.

Primarily C# and Unity Javascript because were are more comfortable using those scripts.

This program will allow us to compile all the resources such as 3D models, sounds, music, and etc to create as one game.

This program was chosen for its friendly user-interface and ease of use for creating games from scratch.
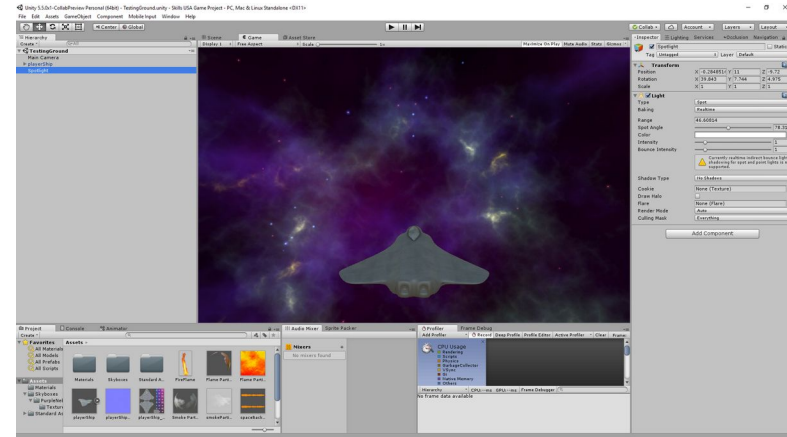
Blender 3D is a great free 3D modeling program that allows us to create models for the game and allows us to UV texture and create normal maps for the models to pop out with color and materials.

Programs: Image Editing

Gimp, Adobe Photoshop, & Adobe Fireworks:

Gimp, Adobe Photoshop, & Adobe Fireworks are great photo and image editing tools that allow us to edit, create, and modify game files such as logos and textures with ease.

Gimp would be the best free solution to the processes as listed above, Adobe Photoshop being the paid alternative; Adobe Fireworks being another solution because it's available on the school computers and windows at home but isn't commercially available anymore.

Programs: Audio and Music

Adobe Audition, Audacity, and LMMS:

Programs such as Adobe Audition and Audacity are waveform audio programs that allow us to create voice overs for the game and modify them to distort or create other filters to be used in the game. While LMMS is an open source music program similar to FL Studio that allows us to create custom songs for the game in any format that is allowed for Unity to use.
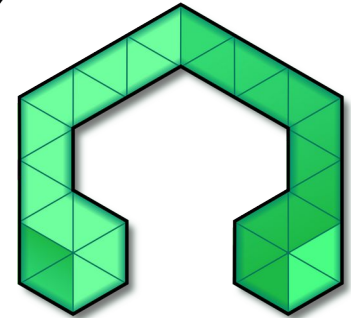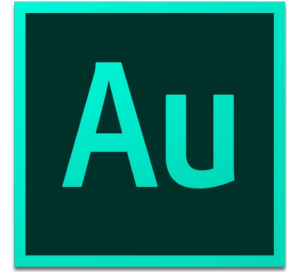
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