

Insect War Force 7

Version 1.0 February 9, 2018

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 - 3.4.2. Advanced players going to high scores and aiming for hour+ long runs
 - 3.5. Game Flow Summary
 - 3.5.1. Player starts with a small amount of starting gold and beings to build their fortress
 - 3.5.2. Player will upgrade their defences and strategy to survive for longer and longer periods of time up until and after a special “boss” round
 - 3.6. Look and Feel
 - 3.6.1. 8 bit graphics
 - 3.6.2. Game takes place in a child’s imagination
 - 3.6.3. Enemies are bug and bug-like creatures
 - 3.6.4. Towers are composed of bits and pieces of toys the child may have to build the perfect fighting machines
 - 3.7. Project Scope – A summary of the scope of the game.

- 3.7.1. Number of locations
 - 3.7.1.1. 3 Map layouts
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 - 4.1. Gameplay
 - 4.1.1. Game Progression
 - 4.1.1.1. Play one map to unlock the next map and Hard Mode for the map that was played
 - 4.1.1.2. Endless Mode unlocked for maps after beating them on Hard Mode
 - 4.1.2. Objectives
 - 4.1.2.1. Survive a set number of enemy waves or survive as many waves as possible
 - 4.1.3. Play Flow – How does the game flow for the game player
 - 4.1.3.1. The game will provide periods in between each waves for players to place new towers or upgrade existing ones
 - 4.1.3.1.1. Players will have the option to skip this period and go directly into the next wave
 - 4.2. Mechanics
 - 4.2.1. Physics will only affect specific towers, determining travel distance and speed of projectiles based on multiple factors that are changed as a tower is upgraded (weight of projectile, starting velocity, angle of shot, ect.)
 - 4.2.2. Movement
 - 4.2.2.1. The player themselves will not move, the entire view of the map will be available for the player on one screen. Use the mouse to position new towers and reposition existing ones.
 - 4.2.2.2. Enemies will follow a predetermined path to the “end”, there will be multiple paths as the difficulty of the level increases, however once an enemy starts on a path, it will follow that path to the end goal
 - 4.2.3. Objects
 - 4.2.3.1. There will be special gold drops, and rare upgrades dropped by enemies throughout the level, by clicking on or dragging to specific towers the player can use these objects to quickly upgrade their defences
 - 4.2.3.2. Specific towers will allow for repositioning throughout the game levels. By adding the movable upgrade module to existing towers the player can dynamically redistribute their defences as needed
 - 4.2.4. Actions

4.2.4.1. The player will have buttons to cycle through upgradable towers, select towers that are the highest and lowest current towers on the field, and a special tab for movable towers

4.2.4.2. There is minimal picking up. All “drops” will be clicked on once and added to the player's inventory. Special items will be draggable from the inventory to towers which they will be able to upgrade

4.2.5. Combat

4.2.5.1. The player will play the role of the grand general in combat

4.2.5.2. The player will establish their defences, set up their towers and watch as waves and waves of enemies crash themselves against the great bastions that have been established

4.2.5.3. The player will also have access to powerful special attacks that will be available on long cooldowns. Once per wave, once per 10 minutes, ect.

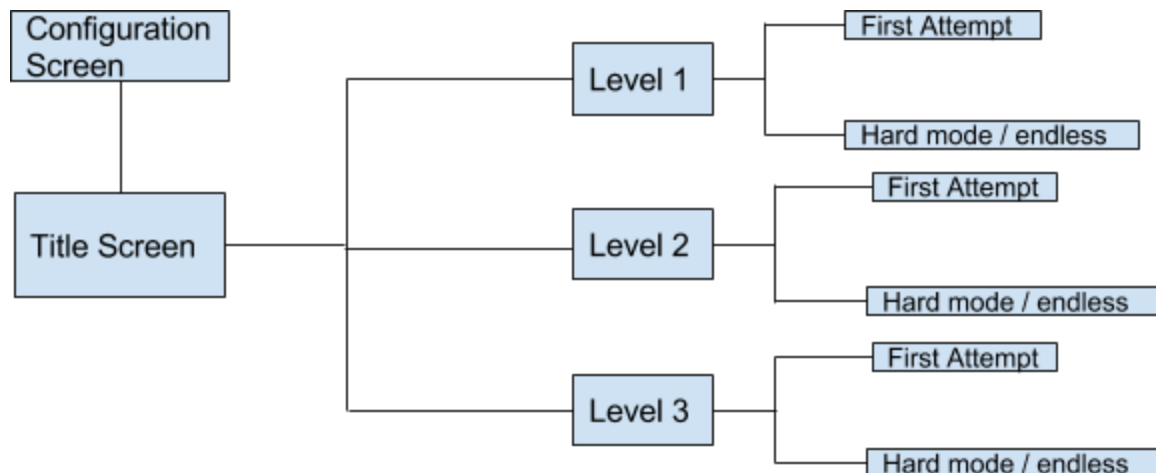
4.2.6. Economy

4.2.6.1. The player will generate gold by defeating enemies that are assaulting their defences

4.2.6.2. Harder enemies will drop larger amounts of gold that will allow the player to upgrade defences further and therefore defend against harder and harder enemies

4.3. Screen Flow

4.3.1. Screen Flow Chart



4.3.2. Screen Descriptions

4.3.2.1. Main Menu Screen - display the intro for the game, choose what way to play

4.3.2.2. Configuration Screen - configure the controls, change keybinds, ect.

4.3.2.3. Level selects (1-2-3)

4.3.2.3.1. Choose first attempt or endless/hard modes

4.4. Game Options

4.4.1. Change difficulty options

- 4.4.2. Adjust handicap (starting currency)
 - 4.4.3. Change starting wave (experienced players may wish to skip the boring first 15 waves)
- 4.5. Cheats and Easter Eggs
 - 4.5.1. TBD (special achievement for particular tower combinations that produce special effects)
- 5. Section III – Story, Setting and Character
 - 5.1. Story and Narrative
 - 5.1.1. A small child defences his house from the dangers of wild outside world
 - 5.1.2. Small text snippets allowing for player understanding of what the “child” is thinking
 - 5.1.3. Game Progression
 - 5.1.3.1. Child (player) becomes more confident with their ability to defend the house
 - 5.1.3.2. Advanced towers and upgrade become available as the defending character gains a deeper understanding of his enemies and his forces
 - 5.2. Game World
 - 5.2.1. General look and feel of world
 - 5.2.2. Map #1
 - 5.2.2.1. Simple, straight forward tower defence map, slight bend, nothing too complex
 - 5.2.2.2. Map 1 will be the fringe of the back yard. There will be trees from which the enemies emerge and they progress toward the manicured and maintained portion of the lawn
 - 5.2.2.3. Level 1 and Level 1 endless & hard modes
 - 5.2.3. Map #2
 - 5.2.3.1. Main portion of the yard. More complex enemy paths with more than one path the enemies might follow.
 - 5.2.3.2. Composed entirely of “lawn-like” visuals, toys strewn about, sprinklers, ect.
 - 5.2.3.3. Level 2 and Level 2 endless & hard modes.
 - 5.2.4. Map #3
 - 5.2.4.1. Small portion of yard and the entrance to the house. Enemies will have multiple approach paths and will not follow the same pattern of path choices during each playthrough. This is the most difficult level
 - 5.2.4.2. Halfway through the level tileset will transition from that of the outside to the inside. Special “objects” will be on the inside portion of the tileset providing unique benefits to towers build on and around them
 - 5.2.4.3. Level 3 and Level 3 endless & hard modes
- 6. Section IV – Levels
 - 6.1. Level #1
 - 6.1.1. Introduction to the game

- 6.1.2. Series of pop up telling the player how to place their first tower and start the wave (after wave 2 an addition pop up will appear explaining the upgrade process)
- 6.1.3. Survive the round with at least one health remaining
- 6.1.4. 9 progressively harder and larger waves of enemies assault the base followed by a final boss round
- 6.1.5. Map #1
- 6.1.6. There will be multiple defence setups that will result in a “perfect” score. I.E. no loss of life
- 6.1.7. Developers will have a preset tower setup that will be able to complete the level. This is by no means the “best” way to complete the level
- 6.1.8. Closing score screen with total number of enemies defeated and stats such as gold/ time spent
- 6.2. Level #2
 - 6.2.1. First real level
 - 6.2.2. No tutorial, player is expected to know the base gameplay at this point and read tower stats and tooltips to produce the optimal defence setup.
 - 6.2.3. Survive the round with at least 1 health remaining
 - 6.2.4. 9 progressively harder waves followed by a boss wave, then an additional 9 waves with randomized path selection and yet another boss wave
 - 6.2.5. Map #2
 - 6.2.6. Again, there will not be a true “perfect” setup as there is always the possibility for defence optimization and new combinations. However there will be a working defence strategy provided to the publisher
- 6.3. Level # 3
 - 6.3.1. Main level of the game
 - 6.3.2. There will be no tutorials or hints. the player is expected to understand the game and be able to think on their feet as the level progressed.
 - 6.3.3. Survive the round with at least 1 health remaining
 - 6.3.4. 9 progressively harder waves followed by a boss wave, then an additional 9 waves with randomized path selection and yet another boss wave. After the second boss wave enemies will assault the player for more than one randomly determined assault path. This will consist of 9 waves followed by a boss wave where two bosses spawn simultaneously each following a different assault path
 - 6.3.5. Map # 3
- 6.4. Endless mode
 - 6.4.1. Option of selecting map 1, 2, or 3
 - 6.4.2. First time popup explaining the basis of endless mode. The player will progress through the predetermined waves for their level selection. After which the game will upgrade number of enemies, health, speed, and durability of enemies as the waves progress
 - 6.4.3. Survive as long as possible racking up as many enemy kills without running out of lives

- 6.4.4. Previously produced waves followed by generated waves as levels progress
 - 6.4.5. Map #1, #2, or #3
- 7. Section V - Interface
 - 7.1. Visual System
 - 7.1.1. HUD
 - 7.1.1.1. Inventory
 - 7.1.1.2. Gold stash
 - 7.1.1.3. Current wave number
 - 7.1.1.4. Remaining health
 - 7.1.1.5. Build/Upgrade buttons
 - 7.1.2. Menus
 - 7.1.2.1. Title screen
 - 7.1.2.2. Option/Configuration screen
 - 7.1.2.3. Level selection
 - 7.1.3. Rendering System
 - 7.1.3.1. GameMaker Studio 2
 - 7.1.4. Camera
 - 7.1.4.1. Fixed top-down, third-person view for each map layout
 - 7.1.5. Lighting Models
 - 7.1.5.1. Daytime all the time
 - 7.1.5.2. No shadows or dynamic lighting effects
 - 7.2. Control System
 - 7.2.1. Left Click
 - 7.2.1.1. Tower placement
 - 7.2.1.2. Inventory selection (draggable elements)
 - 7.2.1.3. Pickup interaction
 - 7.2.1.4. Upgrade selection
 - 7.2.2. Right Click
 - 7.2.2.1. Bring up tower menu
 - 7.2.2.1.1. Stats
 - 7.2.2.1.2. Upgrade menu
 - 7.2.2.2. Enemy tooltip
 - 7.2.2.2.1. Stats
 - 7.2.3. Keys
 - 7.2.3.1. Used for cooldown abilities
 - 7.2.3.2. Can have custom bindings
 - 7.3. Audio
 - 7.3.1. Self recorder tower fire sounds
 - 7.3.2. Construction sounds
 - 7.3.3. Enemy movement and death sounds
 - 7.4. Music
 - 7.4.1. Basic 8-bit soundtrack produced in house
 - 7.5. Sound Effects
 - 7.5.1. see Audio

8. Section VI - Artificial Intelligence
 - 8.1. Opponent AI
 - 8.1.1. Opponent AI will be extremely limited. Once a path is determined the enemy will follow it to completion.
 - 8.1.1.1. Enemies will randomly select a path from available options
9. Section VII – Technical
 - 9.1. Windows
 - 9.2. Gamemaker 2
10. Section VIII – Game Art
 - 10.1. 8-bit style
 - 10.2. Bugs and creepy crawlies
 - 10.3. Maps styled to resemble the backyard of a suburban home
 - 10.4. Multiple unique tower and tower modules to build on
11. Section IX - Management
 - 11.1. Risk Analysis
 - 11.1.1. Maintain project scope. Avoid getting sidetracked by extra details before project is fully implemented.
 - 11.1.2. Comprehensive project plan to keep the development on schedule and moving forward at all times.
 - 11.2. Test Plan
 - 11.2.1. early inhouse distribution to test for bugs (in house being the two sole developers on this wonderful project)
 - 11.2.2. As the game progressed the developers will distribute the game to trusted associates willing to test and attempt to break the game in the search for bugs.
12. Appendices
 - 12.1. Asset List (as assets are created they will be added to the list. Current list contains placeholder titles for where assets will go)
 - 12.1.1. Art
 - 12.1.1.1. Model and Texture List
 - 12.1.1.2. Animation List
 - 12.1.1.3. Effects List
 - 12.1.1.4. Interface Art List
 - 12.1.2. Sound
 - 12.1.2.1. Environmental Sounds
 - 12.1.2.2. Weapon Sounds
 - 12.1.2.3. Interface Sounds
 - 12.1.3. Music
 - 12.1.3.1. Ambient
 - 12.1.3.2. “boss round”
 - 12.1.3.3. Victory
 - 12.1.3.4. Defeat