Project Description

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Aims

The main aim of the project is to produce a ‘zero bug build’ or ‘gold’ version of the VR survival shooter Wide Awake. This means a functional Virtual Reality game with either no bugs or what is classed as gold, a product that can be shipped and distributed to customers that is playable. To get to this stage we will need to go through 4 stages of development, these will be the main goals to hit within the target time to develop the game. These are Pre-Alpha, Alpha, Beta and Gold and will be detailed below.

Pre-Alpha

The main goal of Pre-Alpha is to have documentation of the game ready for development. These documents include the Game Design Document, an asset list for art, programming, audio and design, testing schedule, a scope list for the goals that need to be hit within each stage of production and finally a prototype of the game showing its main functionality. These goals will be vital to the project to hit as it will set up for the rest of the production for the game, it is usually at the end of Pre-Alpha where you will be able to pitch your idea to potential investors to get the production underway.

Alpha

The main goal of Alpha is to produce the game to the point where all the main functionality is in the game. For Wide Awake this will include the functionality of the Player being able to shoot their weapon, damage enemies, be damaged by enemies, working flashlight, enemy movement, the shop function, main menu in its basic form as well as main items that the player will be able to use during that game. It is at the end of Alpha that feature lock will come into play, there will be no more added features, this not only means programming but art too even if at this stage art assets are placeholders. By the end of Alpha, there will be a grey box of the level and some first pass art assets will be included to get the feel of the game. Testing of the games main functionality will begin here, there is expected to be **major** bugs during this time.

Beta

The goal of Beta is to produce the game that has minimum bugs and all art and audio assets have been polished. It is during beta that the main lot of testing will take place as programmers begin to polish out the main bugs and increase functionality. With no new additions to the game, it is important during this time to work through any bugs the quality assurance team finds, whether it be programming or art bugs.

Gold

The goal of Gold is to produce a functioning game without any bugs to have it ready for release. This will mostly involve the quality assurance team making sure that all bugs are found and that the team can correct these issues. It is usually at this stage where only minor bugs are found and fixed.

Plans and Progress - Declan

Roles

Scope and Limits - Speedie

Scope:

*Note in pre-alpha the term scope is used, this is for the rest of development and is included in the respective sections.

Pre Alpha:

Design	Programming	Art

- Market Research
- Business setup costs
- Burn down Chart
- Project Management Document
- Game Design Document
- Grey box
- Asset scale/proportions
- Art Scope
- Design Scope
- Programming Scope
	- Prototype
	  - Player Health
	  - Player Attack
	  - Enemy Health
	  - EnemyAttack
	  - Enemy Movement
	  - Shop
	  - 1 weapon upgrade for shot damage
		- Concept art

Alpha Scope:

Programming	Design	Art	Audio

- Flashlight
- Enemy Manager
- Score Manager
- Shop with:
  - 2 gun upgrade
  - 2nd damage upgrade
  - 1 ammo speed upgrade
  - 1 health increase
  - 2 usable items
  - Damage bomb
  - Health pot
	- Greybox
	- Testing Plan
	- Milestones Document
	- Enemy spawn locations testing
	- 3 different enemy values, tested to see what is more balanced
		1st Pass Mesh
		- Dart Gun
		- Flash Light
		- Doll
		- Environment
		  - Bed
		  - Draws
		  - Bedside table
		  - Lamp
		  - Teddy bear
		  - Floor
		  - Walls
		  - Door
		  - Toy train
			- First pass of backing track for menu
			- Doll giggle/whispers
			- Footsteps
			- Creaking door/floor

Beta Scope:

Programming	Design	Art	Audio
- No new features added - Polishing of current code	- Level Design refinement - Daily Smoke test - AB testing for Level design work - Add and update art assets - Test on all platforms to be launched on - Test with different VR Headsets	Polished models of all assets listed in Alpha scope. Rigging: - Doll - Dart Gun - Flashlight First pass of Textures.	Polish of Backing Track Polish of all sound effects

Gold Scope:

Programming	Design	Art
Final polishing of code / ironing out all possible bugs	- Adding all final textures - Stress testing - Smoke testing	- Polish of all Textures - 3 doll textures along with the other asset textures

Post Production:

- Post Mortem from each team member

Limits:

The main limits of this project will confine it to one level layout, due to the small scale of the game we have opted for just the one level and making sure it has been iterated on so it is enjoyable and balanced. The next will be the limited use of the shop, I have opted to just go with just 6 shop upgrades due to time constraints during Beta this can always be revisited depending upon how the project is coming along and how easy it is to add additional spots in the shop although this is not planned for and will not take priority. There is also the limit of what is to be included in the level as filler, not only because this will not be seen by the player due to the stationary nature of the game but it also frees up artists time to polish the art assets more.

Tools and Technology - Declan

Software required:
Unity 3D V2020.1.1 - License required once sales hit certain value
Prior experience: Speedie

Audacity V2.4.2 - Free to use
Prior experience: Speedie, Ash, Declan, Miller

Blendr V2.83.4 - Free to use
Prior experience: Speedie

Steam (Windows) - Free to use
Prior experience: Speedie, Ash, Declan, Miller

Microsoft Windows 10 OS
Prior experience: Speedie, Ash, Declan, Miller

Gimp V2.10.20 - Free to use
Prior experience: Declan, Miller

Hardware required:
Ryzen 3700X
Prior experience: Speedie

GeForce GTX 1660Ti OC 6GB
Prior experience: Speedie, Ash, Declan, Miller

16GB DDR4 3200MHz
Prior experience: Speedie, Ash, Declan, Miller

Gigabyte B550 AM4 Socket
Prior experience: Speedie

Oculus Rift Virtual Reality Headset - May require Dev Kit
Prior experience: Speedie

HTC Vive Virtual Reality Headset - May require Dev Kit
Prior experience: Speedie, Declan

Testing

Testing Schedule for Wide Awake

Length: 48 weeks

Smoke Testing:

Performed Daily From the Start of Beta until Gold build is complete, used to test the main scripts of the game, will include tasks such as can the player shoot their weapon, can the player take damage, can the enemy take damage, does the enemy locate and move towards the player ect.

User Testing:

User testing will pertain to testing the balance of different mechanics, such as enemy spawn locations, health of enemies, as well as any other type of AB testing that may need to be conducted.

Soak Testing:

Performed once a fortnight. Game will be left running over the weekend, this will test any rounding errors that occur if the game is left unattended at different points in the game.

Compatibility Testing:

Compatibility testing will run from the middle of Beta weekly to test different hardware both computer and VR headsets, The game will be released on Windows computer and will need to work for headsets that are able to be connected to SteamVR such as the Oculus and the Vive.

		Smoke Test	User Test	Soak Test	Compatibility Test
Alpha	Week 1	Daily			
	Week 2	Daily		Over the weekend	
	Week 3	Daily			
	Week 4	Daily		Over the weekend	
	Week 5	Daily			
	Week 6	Daily		Over the weekend	
	Week 7	Daily	Tuesday and Thursday		
	Week 8	Daily	Tuesday and Thursday	Over the weekend	
	Week 9	Daily	Tuesday and Thursday		
	Week 10	Daily	Tuesday and Thursday	Over the weekend	
	Week 11	Daily	Tuesday and Thursday		
	Week 12	Daily	Tuesday and	Over the weekend	

			Thursday		
Beta	Week 13	Daily	Tuesday		
	Week 14	Daily	Tuesday	Over the weekend	
	Week 15	Daily	Tuesday		
	Week 16	Daily	Tuesday	Over the weekend	
	Week 17	Daily	Tuesday		
	Week 18	Daily	Tuesday	Over the weekend	
	Week 19	Daily	Tuesday		
	Week 20	Daily	Tuesday	Over the weekend	
	Week 21	Daily	Tuesday		
	Week 22	Daily	Tuesday	Over the weekend	
	Week 23	Daily	Tuesday		
	Week 24	Daily	Tuesday	Over the weekend	
	Week 25	Daily			Monday Wednesday and Friday
	Week 26	Daily		Over the weekend	Monday Wednesday and Friday
	Week 27	Daily			Monday Wednesday and Friday
	Week 28	Daily		Over the weekend	Monday Wednesday and Friday
	Week 29	Daily			Monday Wednesday and Friday
	Week 30	Daily		Over the weekend	Monday Wednesday and Friday
	Week 31	Daily			Monday Wednesday and Friday
	Week 32	Daily		Over the weekend	Monday Wednesday and Friday
	Week 33	Daily			Monday Wednesday and Friday
	Week 34	Daily		Over the weekend	Monday Wednesday and Friday
	Week 35	Daily			Monday Wednesday and Friday
	Week 36	Daily		Over the weekend	Monday Wednesday and Friday
Gold	Week 37	Daily			Monday Wednesday and Friday
	Week 38	Daily		Over the weekend	Monday Wednesday

					and Friday
	Week 39	Daily			Monday Wednesday and Friday
	Week 40	Daily		Over the weekend	Monday Wednesday and Friday
	Week 41	Daily			Monday Wednesday and Friday
	Week 42	Daily		Over the weekend	Monday Wednesday and Friday
	Week 43	Daily			Monday Wednesday and Friday
	Week 44	Daily		Over the weekend	Monday Wednesday and Friday
	Week 45	Daily			Monday Wednesday and Friday
	Week 46	Daily		Over the weekend	Monday Wednesday and Friday
	Week 47	FInal Smoke Test		Final Soak Test	Monday Wednesday and Friday
	Week 48				

Timeframe

Risks - Miller

The software we are using at Not Awake Studios is Unity. Unity is a cross-platform game engine that uses the language C# and JavaScript for this project we will be using C#.

Using Unity in both its functions and its scripting is well documented and tutorialized, so there are no anticipated learning curves for a new user but we plan on using experienced users for this project.

Some of the main issues are because we are using 3rd party plugins there may be some incompatibilities that are not foreseen. This can then lead to different errors in the programming, for example since we are using the plug-in steam VR due to it having its own pre-made scripts and drop in prefabs (Premade objects that contain scripts and 3d objects) there maybe components that can only be referenced in one script but the programmer will need to referenced in their own script, causing compatibility issues.

Using incompatible file types between software, Example; someone using blender/ 3d modeling software and exports as a wrong file type then when trying to add to unity it won't be able to be used.
-Incorrect sizing, when exporting it could be too large or too small. And when in unity changing size of a model/mesh is a no go.
-Not adhering to polly counts? How detailed the model is = how well the performance will go
-finding a game breaking bug right before release. Does this be a quick fix or delay to fix

During the development of the game, individuals might leave, and this will delay or halt the process for a while. People could be cut for breaching contracts with the company policies. Disagreements and conflict are a factor when it comes to human interaction nothing is perfect in the real world.
Because this is an unpaid project you have the issue of this not being completed, motivation being lost and daily lives getting in the way.

Group Processes and Communication - Ash

Discord remained the primary source of effective communication for assignment 3 - Not Awake Studios. This form of communication also assisted with assignment progression, with each team member expected to utilise Discord at least once daily to reacquaint with the assignment and its proceedings. Main meetings had been established for on Friday evenings due to each member being available at this time.

As well as Discord, the team continued utilisation of Trello for task progression tracking; Github and Google Drive are also used to upload our work once it is completed and proofread.

Individual work is uploaded to Discord for proofreading and group collaboration before being uploaded to Google Drive. The reason for utilising this process is due to the lack of editing in the team's second assignment. In the third Assignment, each member conducted prominent checks prior to upload on GitHub.

An agreement was made between the team that if any member is non-respondent; only the limited work contributed by that team member will be counted towards their share of the assignment. Furthermore, the other team members would be given the remainder of the work to be distributed evenly between the remainder of the team and the work percentage to show their extra efforts.