Cyber Arena TV

GDD

Version 1.3.2

Project Octavius

Contents

1.0 Version History

Version Number	Description
1.0.0	Creation of document
1.1.0	Updated sections 2,3,4
1.1.1	Changes to section 2.1, 2.2
1.1.2	Changes to section 4.3
1.2.0	Completed section 5, 6, 7
1.3.0	Completed section 8, 9, 10, 11
1.3.1	Added diagrams in control section
1.3.2	Contents table updated

2.0 Game Overview

2.1 Elevator Pitch

Cyber Arena TV is a reality TV show set in the future where contestants has multiple mini-games for players to play in. If scope allows, the three starting mini-games (in order of production), Icebreaker, Hot-potato and Hamster balls.

2.2 Concept

It is a futuristic game show where regular people enter into the digital arena and duke-it-out against other Gladiators in a multitude of different last-person-standing challenges and one-on-one combat. These challenges each test different skills whilst also being easy to understand and learn.

2.3 Narrative Synopsis

The players are contestants on the Cyber Arena TV show of the future.

2.4 Genre

3rd person platformer / party game.

2.5 Target Audience

People that enjoy party games.
People that enjoy action games.

2.6 Platforms

Windows.
itch.io

3.0 Goals

To win the mini-games.

4.0 Gameplay

4.1 Victory Conditions

The player must be the last person standing in the mini-game to win the round.

4.2 Loss Conditions

The player is either knocked into a void or blown up.

4.3 Level Structure

Icebreaker minigame:
Icebreaker is a game with unstable ground below the players and they must avoid falling into the pit. The floor will begin to break when a player steps on it or when the arena's ball hits it. The floor breaks down in stages; lightly cracked, moderately cracked and critical. Once a tile is destroyed it does <u>not</u> respawn. The players must try to find remaining ground to stay above the void, last player standing wins.

Hot-Potato minigame:
Hot-Potato is a game where the players are rooted to their positions, a bomb is dropped into one of their laps and they get to decide where to throw it. The fuse time on the bomb is random and the players will have to throw it at each other. When the bomb goes off in a player's hands, they are eliminated. The game ends when there is one player left standing.

Bombing Run minigame:
Bombing Run is a game where the players would be placed in an arena with obstacles placed strategically fixed around the area. The players would chase each other around the arena to pass

the bomb to one another by touching them, where the player has the incentive to get rid of the bomb as to not blow up. The bomb would run on a random timer as to try to get the players to be more active with the game as they don't know when it will go off. Last man standing wins.

4.5 Controls

Function	Control	
Icebreaker Minigame		
Movement ● North ↑ ● South ↓ ● East → ● West ←	**Keyboard & Mouse**	**Controller**
	[W] - (North) [S] - (South) [D] - (East) [A] - (West)	[Analog Stick North] [Analog Stick South] [Analog Stick East] [Analog Stick West]
Jump	[Space]	[A]
Shunt	[Left mouse button]	[RT]
Hot-Potato Minigame		
Lobbing ● Quick Lob ● Charged Lob ● Cancel Charge	**Keyboard & Mouse**	**Controller**
	Press [Left Mouse Button] Hold [Left Mouse Button] [Control]	Press [A] Hold [A] [B]
Lob Direction ● Left ● Right	Press: [A] [D]	Hold: [Analog Stick Left] [Analog Stick Right]
Bombing Run Minigame		
Movement ● North ↑ ● South ↓ ● East → ● West ←	**Keyboard & Mouse**	**Controller**
	[W] - (North) [S] - (South) [D] - (East) [A] - (West)	[Analog Stick North] [Analog Stick South] [Analog Stick East] [Analog Stick West]
Passing	[Left mouse button]	[RT]
Jump	[Space]	[A]

Bombing Run Minigame

Movement

North

South

West

East

Pass Bomb

Move North, East, South and West

Press to Quick Lob and **Hold** to Charge Lob

Pass Bomb

Hot-Potato Minigame

Move Lob Direction to the right

Cancel Charge

Move Lob Direction to the Left

Press to Quick Lob and **Hold** to Charge Lob

Move Lob Direction to the Left and Right

Press to Quick Lob and **Hold** to Charge Lob

Cancel Charge

Icebreaker Minigame

Movement

North

South

West

East

Shunt

Jump

Move North, East, South and West

Shunt

5.0 Mechanics

A list of each mechanic for each mini-game and how they function.

5.1 **Icebreaker**

5.1.1 Tiles

The hexagonal-shaped tiles tessellate into one large hexagon which creates an arena for players to compete on. The tiles have three stages of breakdown resulting in a total of 4 different states; untouched, lightly cracked, moderately cracked and critical.
After standing on the same tile for 1.5seconds it loses -1HP.

- **Untouched: 4/4 HP, no signs of damage, no player or ball has hit this tile.**
- **Lightly cracked: 3/4 HP, slight damages visible, one touch from player or ball.**
- **Moderately cracked: 2/4 HP, definite damages visible, two separate contacts from player or ball.**
- **Critical damage: 1/4 HP, Critical damage, one more touch from a player or ball will destroy the tile entirely.**
- **Destroyed: 0/4 HP, the tile ceases to exist.**

Additionally, each tile has the potential of being stacked on top of another creating a column, with a maximum of 3 tiles stacked up. Each tile retains its own individual 'health' within the column.

5.1.2 Arena Ball

The arena ball is a ball that bounces off the tiles and off the roof going back and forth, upon each impact with a tile it applies one level of cracked damage, destroying the playable space.

The ball cannot be moved by players, even if it hits a player it will continue to bounce back and forth on its original path. If a player is hit by the ball they are knocked over and stunned for a brief period.

The ball will bounce off the floor and go off screen and 'soft-lock' onto a player so that if players are staying in a similar area it will travel toward them.

The ball will emit a shadow beneath it for players to be away in what direction the ball is headed.

5.1.3 Player Movement

- Each player has movement in all cardinal directions used via keyboard or controller for each respective player.
- Each player can jump the equivalent height of the character's standing height.
- **Stuns:**
  - Players that get hit with the Arena Ball enter a stunned state where they cannot move for 1 second.
  - Players shunted by another player get stunned for 0.25 seconds before regaining control of movement.
- When moving between the height differences in the tiles, a difference of 1 tile will <u>not</u> require a jump. It is only when there is a difference in heights of 2 + tiles that require a jump.

5.1.4 Shunting

Shunting is a push from one player onto another. The pushed player will be briefly stunned and travel in the direction that is being held by the pushing player.

e.g if the player is holding the analog stick to the right and shunts the other player, it will move to the right.

To shunt another player they must be within very close proximity of each other and a prompt will appear when they are inside the range to shunt.

5.1.5 Camera

The camera is at a 45-degree angle ensuring the players and arena are all in the frame at any one time. The ball will bounce in and out of frame.

5.2 Hot-potato

5.2.1 Hot-potato bomb / Fuse

- The "Hot-potato" that players pass around will be a bomb.
- The bomb's fuse has a random timer set each time it spawns. Between 7 - 16 seconds inclusive.
- The timer on the fuse only goes down when in possession of a player to avoid it going off in the air/stalemates.
- When a player is left holding the bomb when the fuse burns out, it will explode eliminating the player holding the bomb.
- A new bomb will spawn to the right of the player that was just eliminated.
- There will be a pulsating vignette that will match with the timer of the bomb.

5.2.2 Passing and holding

- A player can hold the bomb for a certain amount of fixed time. Once time runs off game randomly passes bomb to next player. Bomb gets to hot to hold.
- The player will have a choice of which direction to pass the bomb which will be displayed via a HUD. Left or right of them (provided it isn't a 1v1)
- The player will be able to either press and hold the button to lob the bomb on release or quickly tap it to flick across the bomb to the opponent.
  - The longer the hold the longer the air time, with a limit of 1.5 seconds hold time. After that point, the bomb is put back into an idle state.
  - A single button press passes the bomb over. (refer to 5.2.4 for further air time details.)
  - <u>Players can press a different button to cancel a charge of a lob.</u>
    - E.g A player is holding "A" to pass to their left, before they release the button they press "B" and it will reset it to the idle hold state instead of waiting the 1.5 seconds.
- The fuse timer continues whilst the bomb is in possession of the bomb, so you cannot hold the lob button to stop the timer.
- "Hot fingers" will happen when a player holds onto the bomb too long, after 3 seconds of holding the player will automatically pass the bomb to their right.

5.2.3 Catching and fumbling

- Players will have a short window to press a button to catch the bomb if it is lobbed.
- If the bomb is passed it is a larger window to press a button to catch it.
- If the window is missed or the catch attempt is missed, it will fumble the bomb.
  - Pressing the catch button when it is not within catching range plays a "snatch" animation where the player cannot do another input whilst it plays. This will avoid button spam.
- If the bomb is fumbled the player will play a 1-second animation of picking the bomb up before they can pass it off.
  - The bomb is counted as in possession if the player fumbles it so it can go off during this animation.

5.2.4 Bomb air time

- When the bomb is in the air the fuse timer pauses.
- Depending on the amount of power put into the lob it will affect the arc of the bomb. The higher the power, the higher the height of the throw.
- Passes will have minimal air time.

5.3 Bombing Run

5.3.1 Player Movement

- Players would be allowed to move in any direction they would like on either keyboard & Mouse or controller
- Players are able to jump as high as their players height in game.
- **Stuns:**
    - Players are able to be stunned once being given the bomb to allow foir other players to escape player with the bomb.
    - Stun should be in affect for 1 seconds after being passed the bomb.
- Player with bomb will be slightly faster than other players without the bomb to increase activity playing the game.

5.3.2 Bomb's Fuse

- Bomb's fuse is randomly set at the beginning of each round of 'Bombing run'.
- Bomb's fuse ranges between randomly 15 - 30 seconds for each bomb.
- Bomb's fuse must not stop at anytime.

5.3.3 Platforms

- Platforms must be scattered around the map for a more strategic gameplay.
- Platforms must not obstruct the player camera's view at all (Blocking the character from view).
- Platforms are allowed to have multiple layers.

5.3.4 Camera

The camera view would consist of a sort of straight on isometric view of all the players on the field. Effectively being able to play multiplayer with just the 1 screen. This is why the platforms must not obstruct player view's of their player character.

6.0 User Experience

6.1 Menu Connection
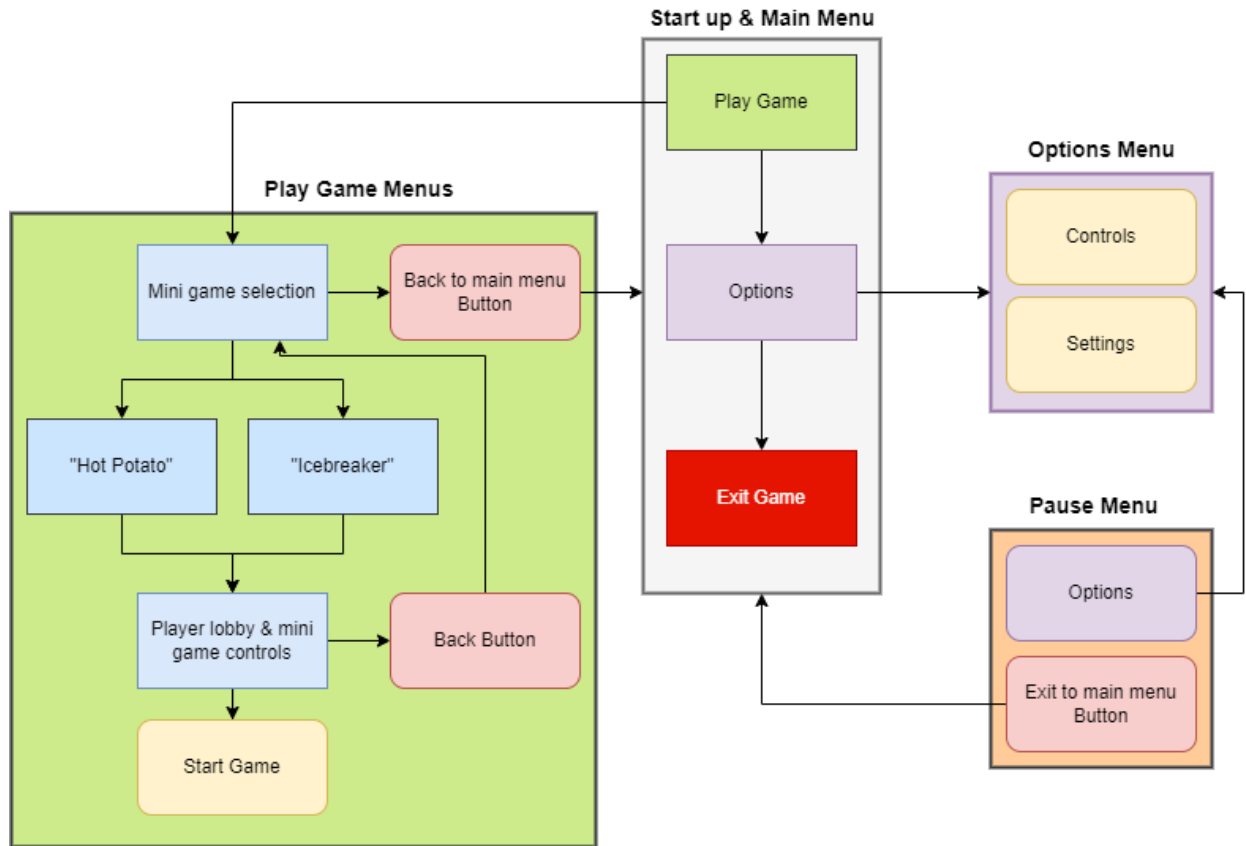
6.2 Heads-Up Display and UI

Each game will have its own simple HUD and UI that will provide player feedback on gameplay.

6.2.1 Icebreaker HUD
- **Portrait:**
  - Each player will have a small portrait lining the bottom of the screen.
  - The portrait will be greyed out once the player is eliminated.

6.2.2 Icebreaker UI/GUI and Gameplay Feedback
- **Coloured outfits:**
  - Each player has a unique coloured neon outfit to clearly identify which person controls which character.
- **Arena Ball:**

- ○ The arena ball will highlight the floor it is falling over so players can see where it is going to land.
- **Tiles:**
  - ○ As tiles take damage they will visually crack in 3 distinct stages
    - ■ <u>**Untouched:**</u> *4/4 HP, no signs of damage,*
    - ■ <u>**Lightly cracked:**</u> *3/4 HP, slight damages visible,*
    - ■ <u>**Moderately cracked:**</u> *2/4 HP, definite damages visible,*
    - ■ <u>**Critical damage:**</u> *1/4 HP, completely shattered,*
    - ■ <u>**Destroyed:**</u> *0/4 HP, the tile ceases to exist.*
- **Stunned status:**
  - ○ When a player is hit by a ball or shunted they will have a "dazed" icon above their head so they know they're stunned.
- **In range for shunt:**
  - ○ When a player enters a close area to shunt a player, the button to do the shunt will appear above their head.

6.2.3 Hot Potato HUD

- **Portrait:**
  - ○ Each player will have a small portrait lining the bottom of the screen.
  - ○ The portrait will be greyed out once the player is eliminated.
- **A power bar for when a lob is being thrown.**

6.2.4 Hot Potato UI/GUI and Gameplay Feedback

- **Coloured outfits:**
  - ○ Each player has a unique coloured neon outfit to clearly identify which person controls which character.
- **Pulsating vignette:**
  - ○ The vignette will match the rate of the fuse burning through. It will pulse faster the shorter the fuse is.
- **The bomb colour shifting and changing scale**:
  - ○ As the bomb gets progressively more unstable the bomb will shift colours to a brighter ball of light.
  - ○ The bomb would start to rattle and agitate more as it gets closer to exploding.
- **Directional arrow:**
  - ○ A directional arrow would appear from the person throwing the bomb pointing toward the person catching it.
- **A Stage light:**
  - ○ A stage light would appear above the person indicating they're holding the bomb.
  - ○ The mark would wiggle more if the person holds onto it too long and needs to throw it.

6.2.5 Bombing Run HUD

- **Portrait:**
  - Each player will have a colourer lining on their screen to show if they have the bomb or not. (E.G. Players outlined screen is blue, they get given the bomb, then the outline is red)
    - In the middle, at the bottom of the screen will say if you have the bomb or not in addition to the screen's outline colours.
    - HUD and screen will fade to gray once the player is killed off.
    - Player's HUD outline would react to gameplay (E.G. Stars on screen when stunned or flashing red when bomb is about to explode).

6.2.6 Bombing Run UI/GUI and Gameplay Feedback

- **Coloured outfits**
  - Each player would have uniquely coloured outfits so that the players could be easily distinguished amongst each other.
- **Bomb about to explode**
  - Bomb would have a sound of the fuse going down throughout the game, but as it is about to explode it will ring.
  - The bomb will start flashing red when it is about to explode.
  - The HUD will also flash red once the bomb is about to blow up.
- **Passing UI**
  - Once the player is close to another player a UI pop-up would appear to show the player that they can give the bomb to the next person.
- **Stunning**
  - The player's HUD will have stars on the screen whilst the player is stunned.

7.0 Narrative

7.1 Game World

Set in the future people still need their reality TV, and people tune in weekly to watch contestants compete in gladiatorial mini-games.

8.0 Levels

8.1 Icebreaker

Icebreaker is in a randomly generated hexagonally tiled arena. Variations in height are generated each time the game is run. The arena is in a colosseum-like area with a crowd in the stands.

8.2 Hot Potato

The hot potato arena is a static staged arena where players are unable to move. The arena will be surrounded by an audience.
They will have a stage light shone onto them when they have possession of the bomb.

8.3 Bombing run

9.0 Audio

9.1 Music

Each mini-game will have its own theme, it would be very synth heavy and 80/90s inspired.

9.2 Sound Effects

9.2.1 Icebreaker sounds

- **Ice breaking sounds**
  - Each level of break has different intensities of cracking and shattering sounds.
    - Level 1: low-pitched snap sound effect
    - Level 2: crack sound effect
    - Level 3: moderate/high pitch smashing sound
    - Level 4: Shatter down effect.
  - To avoid sound fatigue there will be a variety of sounds for each level of crack and then they can have minor pitch shifts upon playing the sound.
- **Stun sound**
  - When a player is stunned a sound effect of an impact is played and then layered with a whirling sound effect for the stun's duration.
- **Ball sound**
  - The ball will have a sound when it bounces off the floor and off-screen.
- **Elimination sound**

- ○ When a player is eliminated it will play a sound effect.
- ○ When the player is falling off the map it will trigger a screaming effect that fades out.
- **Victory anthem**
  - ○ Victory theme (1 for all minigames).

9.2.2 Hot Potato sounds

- **Bomb sounds**
  - ○ An electrical explosion sound will occur upon detonation.
  - ○ An increasing fizzing sound of the bomb as it gets closer to blowing up.
  - ○ Fizzing sound when the bomb is fumbled.
- **Elimination sound**
  - ○ When a player is eliminated it will play a sound effect.
- **Grunting of the characters throwing and catching**
- **Victory anthem**
 - ○ Victory theme (1 for all minigames).

9.2.3 Bombing run

- **Elimination sound**
  - ○ The elimination sound of the player would simply just be a bomb explosion to show that the bomb blew up and a player was eliminated.
- **Bomb sounds**
  - ○ The bomb would have a fuse sound affect.
  - ○ When the bomb is about to explode ringing will start playing.
  - ○ A metallic sound would play once the player has handed off the bomb to the next player.
- **Movement**
  - ○ Very faint sounds of footsteps of the player in the level.
  - ○ Jumping would consist of a sort of grunt.
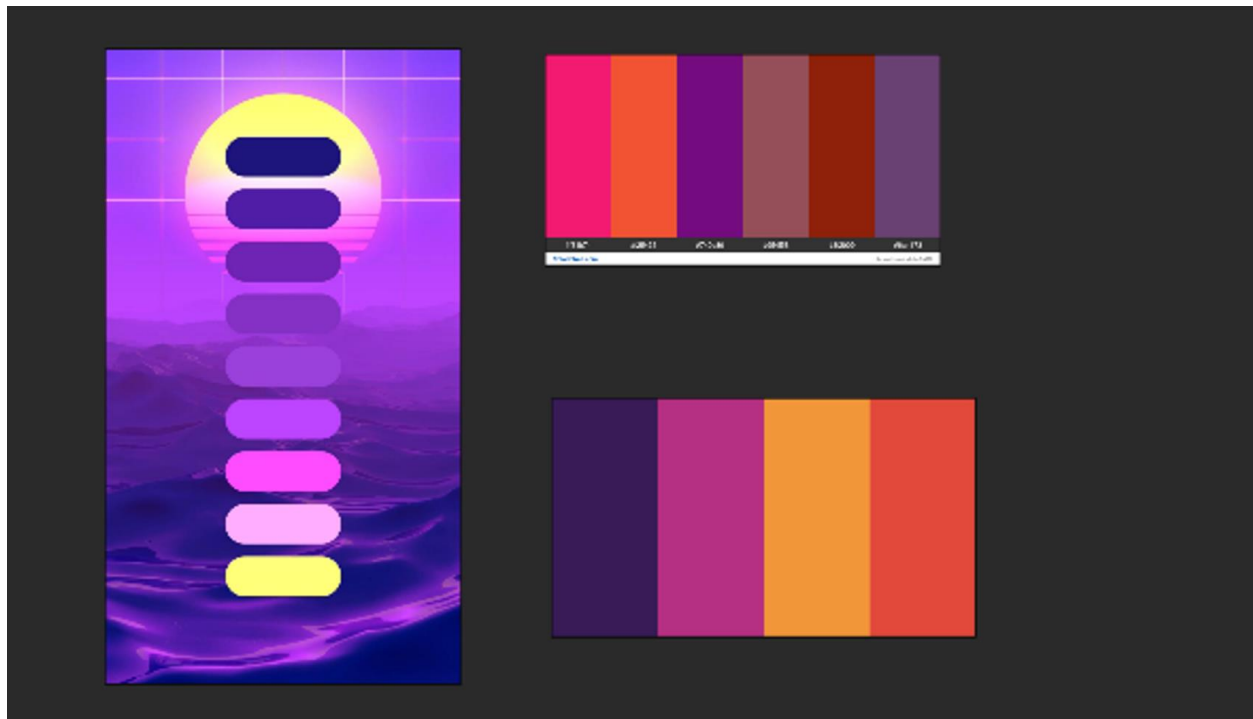- **Victory anthem**
  - ○ Victory theme (1 for all minigames).
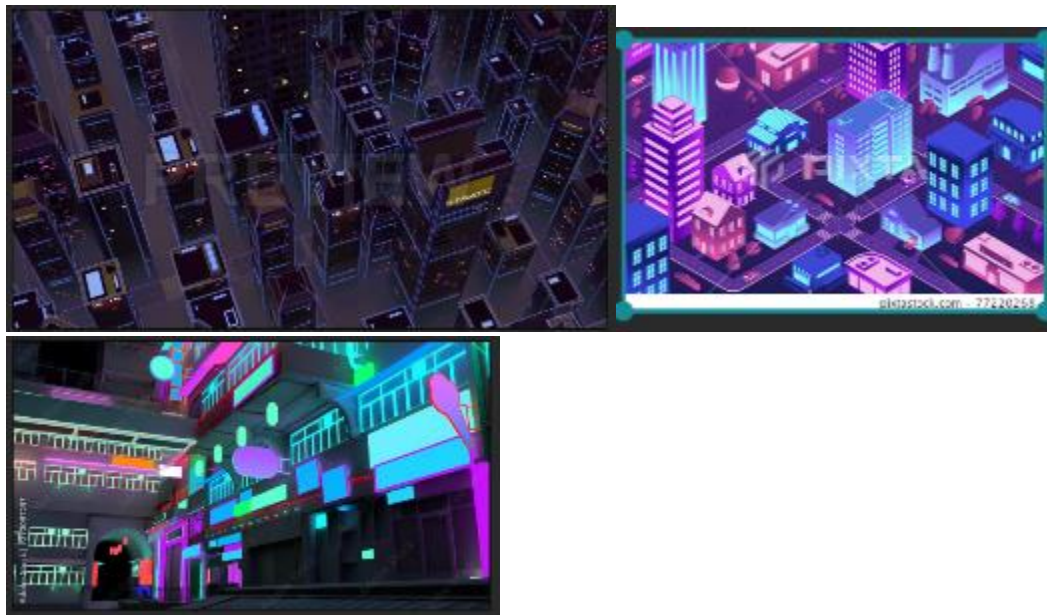
10.0 Art

10.1 Visual Style

- Retro futuristic aesthetic
    - How artists and people in the 80s and 90s thought the future would look.
- "Vaporwave" and "Synthwave" inspired colour and art direction,
    - Lots of purples, yellows and oranges. Contrasted with Neon Cyan and blue.
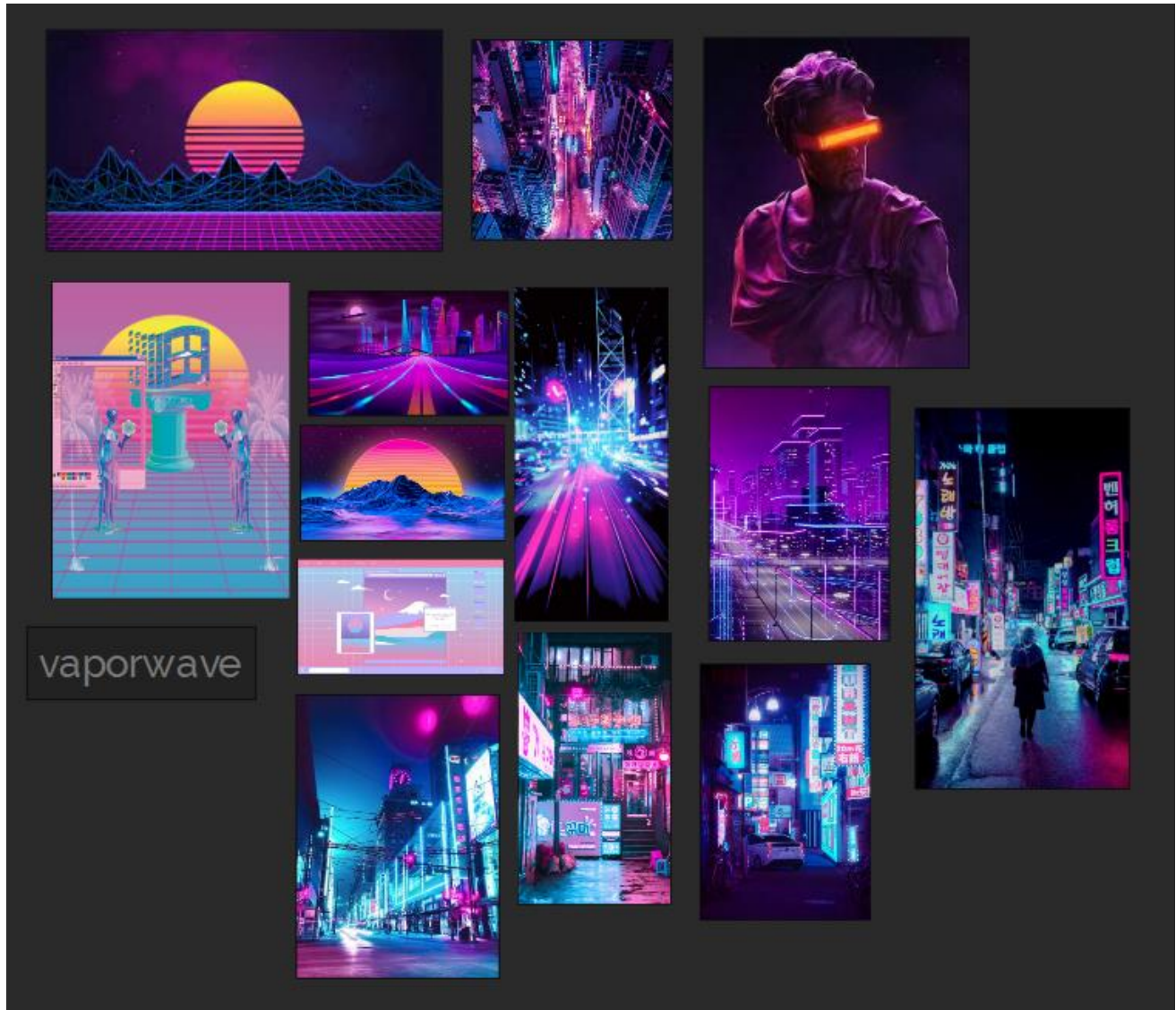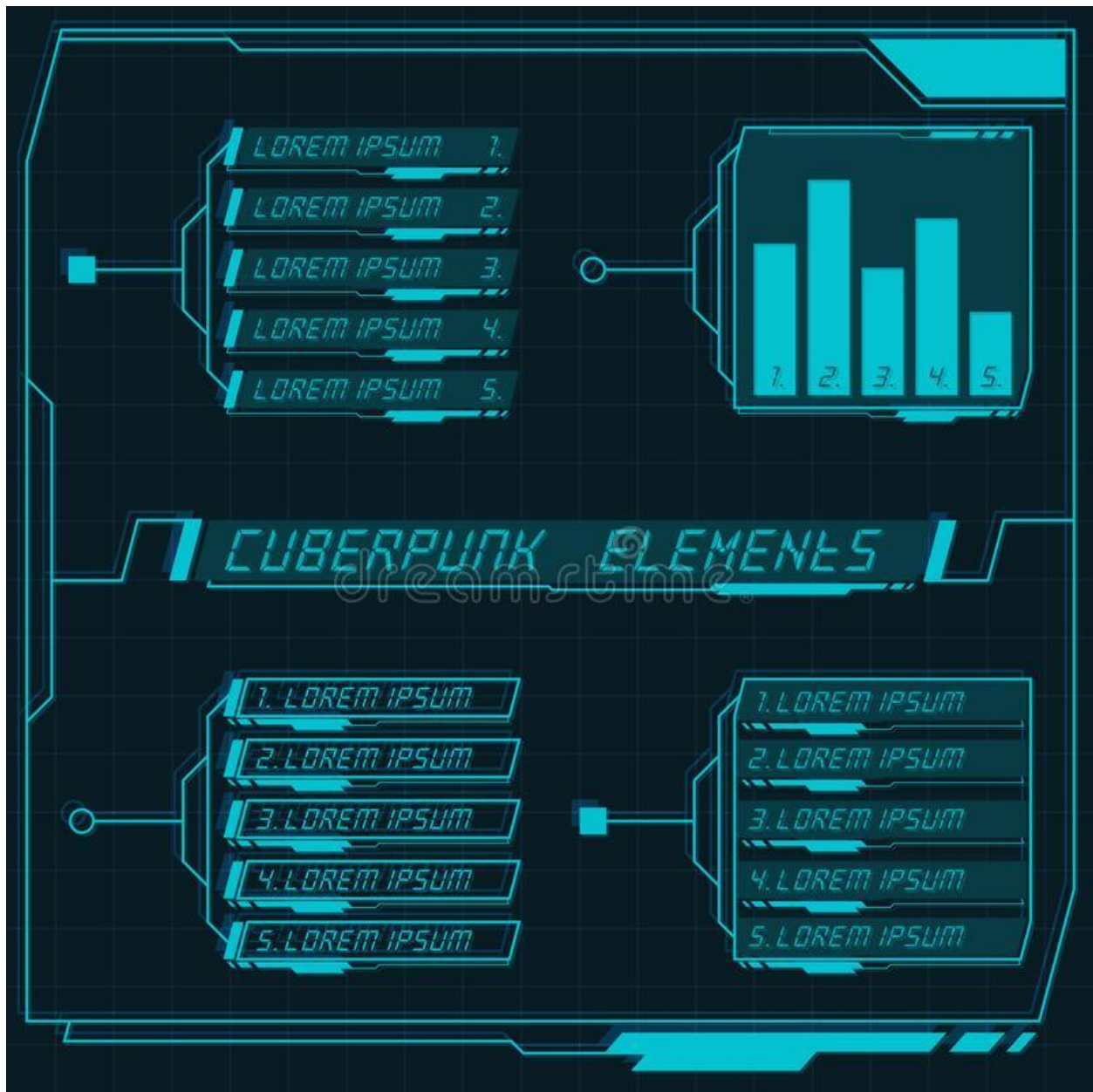
10.1.1 Colour Palette

10.2 Environment

10.3 Characters

10.5 User Interface (Menu / Text / HUD)

11.0 Tutorial

The tutorial is provided in a simple pre-recorded video that displays and dictates the aim of the game. The control scheme will be displayed in a clear diagram next to the video.

Once players have the opportunity to view the video they get the chance to enter into a practice mode where will play the game for them to practice, rather than when everyone dies the game ends, and it will reset until everyone presses a button to confirm they are ready.