

# Fortuna's Cache

Game Design Document

David Rios

## 1) **Game overview**

### a) Game Concept :

- i) 1st person shooter game in which the player is Ricardo Dias, a young explorer looking for treasure! The game primarily focuses on the ideology of completing puzzles as well as defeating mysterious enemies that lurk in the tombs that he explores in order to discover ancient treasure.

### b) Genre:

- i) 1st person shooter
- ii) Modern, grounded in reality via environment, however also includes concepts and enemies that are based in Fantasy.

### c) Target Audience

- i) E+10 for minor violence

### d) Game Flow Summary

- i) The player begins exploring a forest outside of the main tomb. The player then enters the tomb and solves puzzles as they proceed deeper into the tomb. The player then falls down into a larger tomb that breaks off into 4 sections with one main central door blocking the path. Eventually the player unlocks the large central door, finds some treasure and enters a portal that leads into an underground city. Here the player locates a central treasure and solves more puzzles in order to unlock it. After unlocking it the city begins to fall apart and the player escapes the crumbling city.

### e) Look and Feel

- i) Egyptian/New mexican styled tombs and environments.
- ii) Enemies will consist of apparitions and creatures such as ghosts, mummies, and spirits.
- iii) Levels/Rooms will have unique themes defined by enemies, puzzles or environments.

- iv) The main art style is to be accurate to real life, with textures that show off dirt, metal etc.
- v) The color scheme of the game is meant to be defined via traditional tombs, which are usually dark/rocky with lighting via torches/fire. This means the color scheme will have a variety of browns and darker colors, However to add variation, the player will encounter levels that are decorated with paint, runes and varied lighting colors

## **2) Gameplay and Mechanics**

### **a) Game Progression**

- i) The flow of the game should allow the player to freely explore levels until they encounter puzzles/challenges. Before the player encounters the puzzles/challenges, they run the risk of running into enemies in which they will need to defeat before they move on.
- ii) Level Flow
  - (1) The first starts with the player in the forest, moving and encountering their first puzzle. After learning controls/mechanics via the first puzzle, the player reaches the main entrance to the tomb.
  - (2) The second level begins with the player descending into the tomb and encountering more puzzles. The player then encounters enemies for the first time and gets introduced to combat. The player progresses past a combination of enemies and puzzles and reaches a hole in which the player descends and enters the third level.
  - (3) The third level is the center of the large tomb. After descending downward, the player reaches a room with a large stone door in the center. This door is locked and requires 4 gems that are placed in different sections of this

level. Each gem is either hidden behind a puzzle, platforming, hazards or enemies. After retrieving all 4 gems, the player unlocks the central door. Through the door lies piles of gems and another portal that leads to level 4.

(4) Level 4 is an underground city that is split into several sections. In the very center of the city, lies an extremely large sapphire decorated with gold. This sapphire is surrounded by fire pits and the only way to get to it is by releasing the bridge that is currently being held up. (think of a drawbridge) In the city there are sections that have several levers that the player can interact with in order to drop portions of this large bridge. However the levers require the player to either platform, kill enemies, or solve puzzles in order to gain access to them. Once all 5 bridge portions are released the player can return and grab the sapphire. Once picked up, a secret passage opens up nearby as the city begins to shake and fall apart. Once the player runs into the secret passage, level 5 begins.

(5) Level 5 is a race to escape the crumbling city. Here the player is mainly platforming and fighting enemies. Here the player runs through several areas, some overlooking the city, some going through smaller tomb areas, and some that are just corridors. However these places also hold enemies, so the player must travel through these locations and defeat the enemies that block his path. After defeating the enemies and traveling through these rooms, the player reaches one final room that holds a single puzzle. This puzzle is a light based puzzle that requires the player to insert their sapphire to amplify light to unlock specific sections of the room. Once

the player finds the secret light combination, the final door unlocks and the player can escape the city, and win the game.

b) Mission/Challenge Structure

- i) The structure of the levels is **Landmark > Enemy > Special Puzzle/Platforming > Reward**. This flow is to be repeated amongst each room the player comes across until they completed the main objective.

c) Levels

- i) Level 1 - Jungle in front of tomb

(1) This level is focused on teaching the player base mechanics. The location starts outside of a tomb, with the player making their way into it. The player is guided through the levels via audio prompts and will be introduced to the core mechanics of walking, jumping, sprinting, interacting and using the gun.

- ii) Level 2 - Tomb Entrance

(1) This level serves as the 1st “test” for the player and their skills. Here the player will be introduced to very simple puzzles in a controlled environment. Here the player will solve simple puzzles and continue platforming through the tomb. They will also encounter enemies for the first time here. After the player solves all 3 puzzles then they continue into the next level. This level serves as a straight shot and is very similar to a single corridor through several rooms.

(Player is passing through)

- iii) Level 3 - Main Tomb

(1) The player walks into a large room which serves as the main hub for this level. This hub has a very large door in the center. This door is the main objective for the player, and getting through the door leads to the end of the level. The room splits into two paths designated by two doors, one to the east and one to the west. These doors lead to enemies as well as other options. Here the player needs to explore these options and locate all 4 gems that are scattered through this level. Once all 4 gems are collected, the player can freely pass through the main door.

(2) Yellow Corridor

(a) This corridor contains 2 enemies and a very large bonfire/brazier. The main mechanic with this room is focused around a small puzzle that includes “activating” a total of 5 braziers. These braziers are scattered throughout the level, and if the player walks up to the yellow door in this corridor, they are shown a riddle which serves as a hint to the location of these braziers. Once all of the braziers are found, they can open the yellow door and retrieve a yellow gem!

(3) Red Corridor

(a) This corridor is a time based platform room. This corridor contains flamethrowers that shoot from the walls and they activate on a timer. The player must navigate down the hall, shoot enemies, avoid the flames, and reach the red door at the end in order to be rewarded with a red gem! There is also a hole

located behind the gem which can be seen via special lighting and particles. Inside this hole is a portal that teleports the player to the main hall (large door). The player needs to jump into this portal in order to be teleported.

#### (4) Green Corridor

- (a) This corridor is a platforming based puzzle corridor. The rooms floor is decorated with a variety of tiles. Each tile having a respective color. Only one color is safe and all the other ones hurt the player. The player must platform through this room and defeat enemies. Once they make it to the end and reach the green door, they will be rewarded with a Green gem! There is also another portal here in which the player can jump through in order to be teleported to the main hall.

#### (5) Blue Corridor

- (a) This corridor is a small “arena”. The player must platform into a tight space and fight several enemies without getting hit by fire located nearby. Upon platforming past the fire and defeating the enemy, they can reach the blue door and retrieve a blue gem!

#### (6) Main hall - All 4 gems

- (a) With all 4 gems retrieved the player can open the main door in which they find treasure, as well as a portal. Once the player travels through this portal the

screen turns white. Once the screen returns to normal they find themselves in the center of level 4 which is an underground city.

iv) Level 4 - Underground City

(1) Here the player starts in what appears to be an ancient city.

The main objective of this level is to gain access to a very large sapphire decorated in gold that stands in the center of this city. The sapphire is on a pedestal surrounded by fire pits and cannot be reach normally. There are several smaller drawbridge platforms that are nearby that the player can use to reach it, however these platforms aren't available to the player unless they activate levers that are located all around the underground city. These levers are locked behind enemies, puzzles, or platforming. Once the player activates all the levers and gains access to the sapphire, the level's boss appears and must be defeated. After the player beats the large boss, they can get the large sapphire. Once the sapphire is picked a secret passage opens up and the city begins to shake and fall apart. Once the player reaches the secret passage, they enter level 5.

v) Level 5 - Escaping the City

(1) This level starts after the player enters the secret passage.

The city is collapsing and the player must find his way out before he is trapped forever. The player must platform his way out, as well as defeat enemies on the way. This level is timed and because of it, the player will only be required to solve one puzzle at the very end of the long platforming segment that they go through. The puzzle is a light based



combination puzzle. After solving the puzzle, a way out is revealed and the player escapes.

d) Objectives

- i) The main objectives of the game is to journey into the tomb and escape it alive, with its hidden riches.

e) Skill Descriptions:

(1) The game uses the mechanics learned in level 1.

(a) Movement/Run : Main movement of the player. One speed (W,A,S,D keys)

(b) Sprint : The player will be able to sprint and move at a faster speed, as long as they hold the “shift” key, as they press the movement keys.

(c) Jump : Allows the player to move vertically. Used to avoid hazards, maneuver platforms, and jump over pits. Once the player jumps they cannot jump again while they're in the air (no double jump)

(d) Aim/Shoot : The player's camera serves as a first person view, in which they can move the camera with the mouse. They can also shoot their weapon at enemies with the left click. There is no reload function so the player can keep firing as long as they have ammo. However, there is downtime to firing in which the player cannot immediately fire after they just fired their weapon. (no semi-auto clicking to fire)

(e) Interact: The player can interact with specific doors/objects with the “e” key. They are notified that they can do it if they walk up to an interactable object.

f) Mechanics

- i) The player will have a revolver in which they can shoot enemies with.
- ii) They will have an bullet counter that depletes as they use ammo, however they can collect “ammo crates” that are either dropped by enemies OR scattered throughout the level. The maximum amount of bullets is 20.
- iii) Movement physics are semi realistic, allowing the player to jump and move similar to real life. However, bullet physics do not affect the environment. It only affects enemies.
- iv) Player Health, Damage & Death
  - (1) Health System
    - (a) Health system is bar based that is also numbered for player clarification. The player can take damage from enemies, pits, fire, and specific platforming puzzles.
    - (b) Throughout the game the player completes various “corridors” and is rewarded with gems. These gems help progress the game. They also have mystical healing properties which allow the player to regain 5 health when picked up.
    - (c) If at any point the player falls into a pit, runs into fire, or gets hurt from a specific puzzle, they will be given a black screen that gives the player a hint on why they died. During this time they are sent to a nearby checkpoint and allowed to continue to play as the screen returns to normal. If the player is hit by an enemy, they will lose health, as well as have the screen briefly flash red.

(d) If the player loses ALL their hp, the game will be sent to an “Game over” screen, in which they are given the option to try again, or to quit/return to menu.

### Obstacles/Hazards Chart

<b>Obstacle</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
Locked Doors	x	x	x	x	x
Fence/Walls	x	x	x	x	x
Puzzles with no damaging properties.	x	x	x	x	x
Rocks	x	x			x
<b>Hazards (Damages Player)</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>
Flame Throwers			x	x	x
Enemies		x	x	x	x
Boss				x	x
Falling rocks					x
Spiked pits				x	x
Pits	x	x	x	x	x
Puzzles that contain pits/fire/platforming hazards.	x	x	x	x	x

### g) Obstacles

- i) Locked Doors : There will be many locked doors in the game. That require some type of problem solving to open .
- ii) Fences/Walls : These are traditional obstacles that block the player from getting outside of the level.
- iii) Puzzles : Puzzles are challenges for players to complete that stop the player from progressing until they complete it
- iv) Rocks: These are used similarly to walls, however these can be platformed over.

### h) Hazards

- i) Flamethrowers : the player will lose 1 point of health if they run into the fire. At which they will receive a black screen and be sent to a nearby checkpoint.
- ii) Spiked Pits/Pits : the player will lose 1 point of health if they fall into a pit. At which they will receive a black screen and be sent to a nearby checkpoint.
- iii) Puzzles: Some puzzles have the ability to hurt the player. In these situations the player will lose 1 hp. At which they will receive a black screen and be sent back to a nearby checkpoint.
- iv) Falling rocks : These hazards are only seen in level 5, in which they hurt the player upon collision. They lose 1 point of health but they do NOT move back to a checkpoint.

### i) Pickups/Items

- i) Special Gems/Artifacts : Each level has some sort of Artifact/gem that is used to progress. Upon picking these keys/gems up the player will regain 5 hp.

- ii) Ammo Crates : Ammo crates restore gun ammo, and are picked up upon walking into them. These crates are both scattered throughout the level as well as dropped by killed enemies.

- j) Game Options (on ESC)

- i) Resume game

- ii) Quit to menu

### **3) Story, Setting and Characters**

- a) The game narrative is focused on the story of an explorer named Ricardo Dias (player) who is a young explorer and researcher of all things ancient. He is good friends with Amelia Jones, a childhood friend and fellow ancient history expert, and another man named William Brodsky, who is both as loyal to his friends as he is an annoying conversationalist. William also is an experienced cave spelunker and helps guide his two friends when exploring unknown locations. Their current life of exploring nearby caves came through with promising results as they discover some strange cave hieroglyphics that involve what could be translated out to be the "Tomb of Golden Desolation". After some time looking over history books and translating these cave hieroglyphics, Ricardo, William and Amelia find themselves following this lead to a hidden entrance at the base of a pyramid located in "Teotihuacan" in New Mexico. Now with Ricardo leading the way, these 3 explorers seek to find what they hope to be is some undiscovered fortune, however they will soon find out that this is only the beginning of their journey.

Following the map, Ricardo reaches a mysterious jungle in which he travels through in search of his hidden tomb. He eventually reaches the tombs entrance and needs to figure out the way to open it. After some time, Ricardo manages to figure out the secret behind the locked tomb and opens the front entrance. Here Ricardo journeys forward with his wit, trusty revolver, and explorers intuition.

Once inside Ricardo uncovers many interesting illustrations along the walls of this tomb. After travelling through this hall, Ricardo reaches a room decorated with various symbols and images. Ricardo hears a strange noise, and finds what appears to be some type strange looking apparition. Feeling danger, Ricardo reaches for his gun and fires away at the spirit. The spirit in pain disappears after a couple shots and leaves Ricardo free to continue exploring. As Ricardo continues to uncover the secrets behind these various halls and rooms, he reaches a hole that leads deep into the dark below. Ricardo being a head first adventurer, sets up a rope to rappel downward and descends into the dark.

Ricardo reaches the end of the long descent and ends in what looks to be a small tomb with various pots and coffins scattered around. Continuing onward Ricardo reaches a door that towers above him. The room is decorated with various glowing symbols and several interesting looking braziers, and torches. As Ricardo tries to open this large door, he comes to the conclusion that it is locked and he needs to find some way to open it. As he looks around he finds other doors and decides to follow them. Ricardo adventures forth finding more apparitions and shoots them down with his trusty revolver. Through his exploration efforts, he manages to find an interesting gem that seems to be of interest. Ricardo figures that if these can't open the door, then at least they serve as good payment for his exploration. Upon picking them up he feels a strange sensation in his

body, as if he got an entire days rest as he picked up the gem. Ricardo continues his exploration of this tomb and eventually finds 3 more special gems. Returning with all 4 gems, Ricardo tries to use them to open the door, and magically the door opens and reveals a large stash of gems! Upon seeing the treasure Ricardo is filled with joy and collects his reward. As he collects his treasure, a door opens up which reveals a strange glowing portal. Not knowing where else to go, Ricardo decides to travel through and after a bright flash of white, Ricardo finds himself in a huge underground city.

Ricardo looks around and sees that he is surrounded by the ruins of a long forgotten underground city. As he looks around his eyes dart to a glowing blue object. This object is a large blue sapphire decorated with gold. However this sapphire is isolated by huge fire pits that are way too big to jump across. As he looks around he notices several small pieces of stone that appear to be something similar to drawbridges. Unfortunately they aren't in a position where he can jump across, so Ricardo looks around for a way to manipulate them to his benefit. As he explores the city Ricardo finds even more strange apparitions in which he gets rid off easily with his trusty revolver. Eventually Ricardo manages to uncover a small room that contained a single lever. Upon pulling it Ricardo hears the sound of stone shifting, and assumes that it had something to do with the bridges he saw earlier. To his surprise the lever actually made one of the small bridges crossable! Ricardo, now dedicated to finding all the hidden levers, goes forth and tries to uncover the secrets of this city. After finding 4 more levers a large crash sound breaks the silence. Ricardo finds himself face to face with a large mummy monstrosity. Ricardo takes his trusty gun and has a showdown with this large creature. After a large amount of shooting, the boss is eventually defeated. Ricardo is finally able to cross the small bridges and retrieve his sacred treasure. As he picks up

the sapphire, a wall shifts and opens to reveal a secret passage. Rumbling begins as the ground shakes and the city begins to crumble and collapse. Ricardo rushes to this secret passage as his only way out from the collapsing city.

Ricardo runs for his life down this secret passage to try to find a way out of this collapsing tomb. As Riccardo runs down these hallways he is greeted by strange apparitions, twists, turns, drops, steps and various ups and downs. Ricardo driven by the will to survive reaches a single room with sunlight shining through! Symbolizing his last step to escaping this underground death trap, Ricardo must solve a final puzzle utilizing both the light to his freedom, and the treasure that he has dedicated his life to find. Once he uncovers the secret light combination to making it out the door opens, revealing bright sunlight. Ricardo grabs the sapphire and runs to freedom with his riches.

#### **4) Interface**

##### a) Title Screen

- i) Start button - Begins the game upon click

##### b) Interface Menu

- i) Pause Menu - Simple pause menu with the choice to resume game or quit game

##### c) Menu System

- i) New Game : Start New Game
- ii) Quit Button : Exits game

##### d) HUD

- i) Health Bar : Green health bar that shifts to red the closer you are to death - Also numbered for clarification.
- ii) Ammo Bar : Serves as an ammo counter for the player that depletes as the player uses ammo - Also numbered for clarification.



- e) End Game Screen
  - i) Simple Game over screen that Thanks the player for playing.
- f) Control System (Keyboard and Mouse)
  - i) Movement : WASD
  - ii) Jump: Space
  - iii) Sprint : Shift + WASD
  - iv) Aim/Move Camera : Controlled via mouse movement
  - v) Shoot : Mouse LMB
  - vi) Interact : E
- g) Audio, Music, Sound effects
  - i) Background music - Spooky tomb music. Desert themed.
  - ii) Sound Effects are loud enough for player feedback.

### 5) Technical Specs (Minimum)

- a) Windows 7 64-bit
- b) Intel Xeon CPU E5-1620 0 @ 3.60GHz
- c) Keyboard & Mouse
- d) Unity Engine
- e) Coding Language: C#

### 6) Artificial Intelligence

#### Enemies Chart

Enemies	Level 1	Level 2	Level 3	Level 4	Level 5
Ghost		x	x	x	
Teleporting Ghost				x	
Fast Ghost					x
Boss Ghost				x	x

- i) Ghost
  - (1) Health: 3 HP (Require 3 shots to kill)
  - (2) Size: Medium

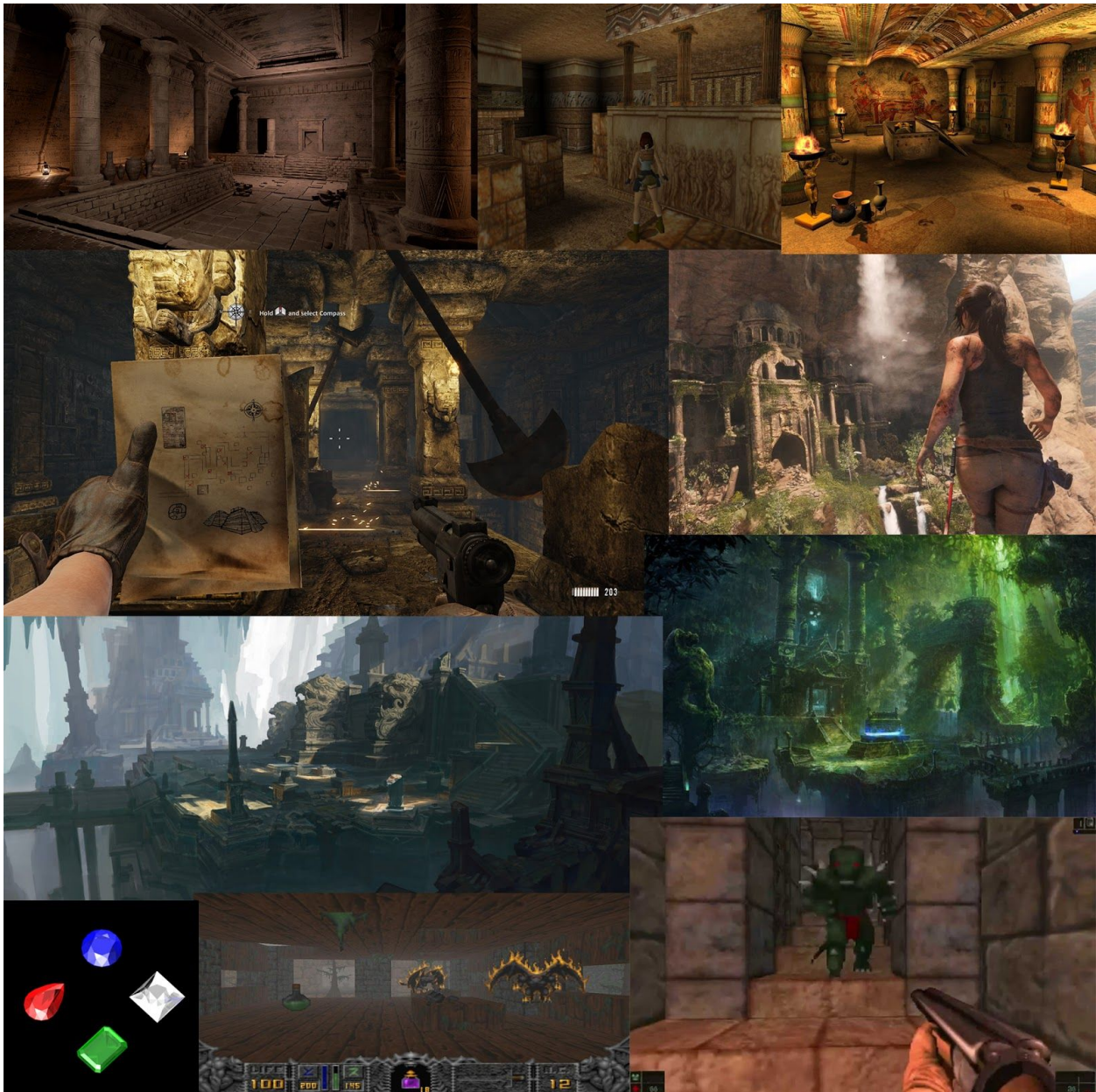
- (3) Movement: Floating Patrol / Fixed path - Chases player upon detection.
  - (4) Attack: Damages player upon contact - deals 1 damage (1.5 second intervals)
- ii) Teleporting Ghost
  - (1) Health: 4 HP (Require 4 shots to kill)
  - (2) Size: Medium
  - (3) Movement: Teleporting / Fixed path - Chases player upon detection.
  - (4) Attack: Damages player via distance/projectile - deals 1 damage (fires in after it teleports 3 times)
- iii) Fast Ghost
  - (1) Health: 2 HP (Require 2 shots to kill)
  - (2) Size: small
  - (3) Movement: Floating Patrol / Fixed path / Sporadic Movement - Chases player rapidly upon detection (larger detection radius).
  - (4) Attack: Damages player upon contact - deals 1 damage (1 second intervals)
- iv) Boss Ghost
  - (1) Health: 4 HP (Require 4 shots to kill / Only vulnerable after it shoots at the player 3 times)
  - (2) Size: Large
  - (3) Movement: Teleportation / Fixed path - Focuses on player
  - (4) Attack: Damages player via distance/projectile - deals 2 damage (fires in after it teleports 2 times)

## 7) Game Art

- a) Assets are to be developed with reference to real life examples. Close to reality.
  - i) Style guide

- (1) Dark gritty Colors to represent tomb themes. However can include small color variation to add flair (small additions of primary colors)
- (2) Realistic - Close to real textures with normal maps
- (3) Visual feedback is done through shift in color via materials OR given through UI.

**b) Mood Board:**



**c) Level Color Palette**

**i) Level 1**



**ii) Level 2**



**iii) Level 3**



**iv) Level 4**



**v) Level 5**



d) Concept Art

