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| **VR Project Design Document** | |  | | --- | | 10|21|2022  **Tyler** | |

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| **1**  **App Info** |  | |  |  | | --- | --- | | Tentative Title: | Castle Exploration | | |
|  | |  |  | | --- | --- | |  | Education & Training | | |  |  | | --- | --- | |  | Mental Health & Fitness | |
| |  |  | | --- | --- | | **X** | Travel & Discovery | | |  |  | | --- | --- | |  | Media & Entertainment | |
| |  |  | | --- | --- | |  | Productivity & Collaboration | | |  |  | | --- | --- | |  | Gaming | |
| |  |  | | --- | --- | |  | Art & Creativity | | |  |  | | --- | --- | |  | Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |

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| **2**  **Pitch** |  | To goal is for users to [learn | experience | practice | review | design | play | other]:   |  | | --- | | Experience a virtual castle and be able to explore various areas and interact with items | |
|  | This will be especially [impactful | educational | memorable | **effective** | fun | other] in VR b/c:   |  | | --- | | The user can experience walking through the castle as if they were in real life and it becomes an immersive experience | |
|  | At a high level, during the app, users will:   |  | | --- | | Walk around a castle courtyard and within the castle to explore various areas. They will also be able to interact with various objects such as doors | |
|  | This experience will be targeted at devices with:   |  |  |  |  | | --- | --- | --- | --- | | [3 | **6**] | degrees of freedom,  giving users control over the | [**rotation | movement & rotation**] | of their head & controllers. | |

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| **3**  **Basics** |  | The app will take place in:   |  | | --- | | A castle | | and the user will get around the scene with:   |  |  | | --- | --- | | [teleport | **continuous** | other | N|A - user will be stationary] | movement. | |
|  |  | |
|  | The user will be able to grab: Torches, doors, cutlery, weapons   |  | | --- | |  | | There [**will** | will not] be sockets: for torches, weapons   |  | | --- | |  | |

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| **4**  **Events & Interactions** |  | There will be haptic / audio feedback when:   |  | | --- | | * Grabbing items * Opening/closing doors | | | There will also be 3D sound from:   |  | | --- | | * Torches/Fireplaces * Environment | |
|  |  | | |
|  | If the user is holding:   |  |  |  | | --- | --- | --- | |  | and presses the trigger, |  | |  | and presses the trigger, |  | |  | and presses the trigger, |  | |  | | Suggestions: a UI change, a sound/video plays, a particle plays, an object is spawned or destroyed. | | | |
|  |  | | |
|  | By default, the left hand will have a:   |  |  | | --- | --- | | [Direct | Ray] | interactor. | | and the right hand will have a:   |  |  | | --- | --- | | [Direct | Ray] | interactor. | | |
|  | And you [will | will not] be able to toggle on a [Direct | Ray] interactor using the [thumbstick | button]. | | |
|  |  | | |
|  | The main menu will be located:   |  | | --- | |  | | | and from the main menu, the user will be able to:   |  | | --- | |  | |
|  | [Optional] There will be additional UI elements for:   |  | | --- | |  | | | |

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| **5**  **Optimization & Publishing** |  | To make the user experience more accessible / comfortable:   |  | | --- | |  | | | |
|  | Given that this app is targeting the [headset model], target metrics are:   |  |  |  | | --- | --- | --- | | Frames per second: | >= \_\_\_\_\_\_ | FPS | | Milliseconds per frame: | < \_\_\_\_\_\_ | ms (= 1,000 / FPS) | | Triangles per frame: | \_\_\_\_\_\_ - \_\_\_\_\_\_ | tris | | Draw calls per frame: | \_\_\_\_\_\_ - \_\_\_\_\_\_ | batches | | | |
|  |  | Lighting strategy: | | |
|  |  | |  |  | | --- | --- | |  | All baked | | |  |  | | --- | --- | | **✓** | Mostly baked with some mixed | | |  |  | | --- | --- | |  | All real-time | |
|  |  | Light probes [will | will not] also be used for more realistic mixed lighting. | | |

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| **6**  **Other features** |  | |  | | --- | |  | |

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| **7**  **Sketch**  **(Optional)** |  |  |

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| **8**  **Timeline**  **(Optional)** |  | |  |  |  | | --- | --- | --- | |  | Milestone | Date | | 1 |  |  | | 2 |  |  | | 3 |  |  | | 4 |  |  | | 5 |  |  | |