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| **VR Project Design Document** | |  | | --- | | 16|05|2024  **Jana Weigel** | |

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| **1**  **App Info** |  | |  |  | | --- | --- | | Tentative Title: | Climb Up! | | |
|  | |  |  | | --- | --- | |  | Education & Training | | |  |  | | --- | --- | |  | Mental Health & Fitness | |
| |  |  | | --- | --- | | **✓** | 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]:   |  | | --- | | Climb a mountain! Use your gravity weapon to place stones which help you to make your way up. | |
|  | This will be especially [impactful | educational | memorable | effective | fun | other] in VR b/c:   |  | | --- | | Fun because there a gaps where the player has to teleport to the other side and floating parts which the player has to reach. There will also be rocks that can be placed on special sockets to place them like stairs. Also he will have a great look over the surrounding sea. | |
|  | At a high level, during the app, users will:   |  | | --- | | Have to have smaller and smaller stones to place. | |
|  | This experience will be targeted at devices with:   |  |  |  |  | | --- | --- | --- | --- | | 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:   |  | | --- | | On an island surrounded by the sea | | and the user will get around the scene with:   |  |  | | --- | --- | | teleport | movement. | |
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|  | The user will be able to grab:   |  | | --- | | * stones | | There [will | will not] be sockets:   |  | | --- | | * For the stones as stairs / platforms | |

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| **4**  **Events & Interactions** |  | There will be haptic / audio feedback when:   |  | | --- | | * A stone is grabbed and gets settled in its socket. | | | There will also be 3D sound from:   |  | | --- | | * Ambient (water, wind) * Music ambient | |
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|  | If the user is holding:   |  |  |  | | --- | --- | --- | | The controller | and presses the secondary button, | The UI with help (controls) appears | | stone | and put it near a socket | The stone will snap to it | |  | and presses the trigger, |  | |  | | Suggestions: a UI change, a sound/video plays, a particle plays, an object is spawned or destroyed. | | | |
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|  | By default, the left hand will have a:   |  |  | | --- | --- | | Ray and direct | interactor. | | and the right hand will have a:   |  |  | | --- | --- | | Direct and ray | interactor. | | |
|  | And you will not be able to toggle on a [Direct | Ray] interactor using the [thumbstick | button]. | | |
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|  | The main menu will be located:   |  | | --- | | In front of the player | | | and from the main menu, the user will be able to:   |  | | --- | | * Start and exit the app | |
|  | [Optional] There will be additional UI elements for:   |  | | --- | | * Help: Controls and Objective * UI for reaching the top of the mountain | | | |

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| **5**  **Optimization & Publishing** |  | To make the user experience more accessible / comfortable:   |  | | --- | | * Main and settings menu can be accessed on secondary Button press * Hint on different positions * Settings: toggle continuous movement and distance grab * Fade into scene and between teleporting points | | | |
|  | Given that this app is targeting the **Meta Quest 2**, target metrics are:   |  |  |  | | --- | --- | --- | | Frames per second: | >= \_72\_\_\_\_\_ | FPS | | Milliseconds per frame: | < \_\_\_\_\_\_ | ms (= 1,000 / FPS) | | Triangles per frame: | 750k-1m | tris | | Draw calls per frame: | 200 -300 (medium) | 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** |  | |  | | --- | | * (optional) bird is following you * Shoot stones with gravity pistol | |

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

[ArtStation - Mountain Rubble / Rocks](https://www.artstation.com/artwork/12XDK)

[ArtStation - Guardian, Justine Cruz](https://www.artstation.com/artwork/av2o0)

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