VR Project Design Document

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App Info

Tentative Title: | Archery Training

Education & Training	Mental Health & Fitness
Travel & Discovery	Media & Entertainment
Productivity & Collaboration	✓ Gaming
Art & Creativity	Other: _____

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Pitch

To goal is for users to play:

> Play a simple archery game, with score tracking and timers.

This will be especially fun in VR b/c:

> Users will be able to dictate the direction and velocity of the arrow as if they were shooting a bow in real life.

At a high level, during the app, users will:

> Be able to improve their accuracy and speed of which they handle the bow and be able to quickly set up for more shots. They will be able to improve their high score as more and more practice is done within the app.

This experience will be targeted at devices with:

6	degrees of freedom, giving users control over the	rotation	of their head & controllers.

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Basics

The app will take place in: | and the user will get around the scene with:

A small custom built archery range	teleport	movement.

The user will be able to grab: | There will be sockets:

- Bow - Arrow - Quiver	- Bow Body and String - Arrows - Quiver

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Events & Interactions

There will be haptic / audio feedback when:

- The user pulls and releases the bow string - Notching the arrow

There will also be 3D sound from:

- The arrow being shot from the bow - Various atmospheric sources

If the user is holding:

The bow	and presses the trigger,	A wooden pickup sound will play
The drawn string	and presses the trigger,	The string is released, and the arrow is fired
	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	interactor.

and the right hand will have a:

Direct	interactor.

And you will not be able to toggle on a Ray interactor using the [thumbstick | button].

The main menu will be located:

On screen after hitting the allocated button. Alternatively, it will be accessible on a nearby wall.

and from the main menu, the user will be able to:

- Quit the game - Change Audio settings - Select other Game mode

[Optional] There will be additional UI elements for:

- Score - Time - Arrow Count (For Time mode)

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Optimization & Publishing

To make the user experience more accessible / comfortable:

- The user is rooted in place, only movement involved is looking around - The user will be able to control the bow with both their left and right hands - Quiver can be placed on back or left somewhere else for easier access to arrows

Given that this app is targeting the [headset model], target metrics are:

Frames per second:	>= 60	FPS
Milliseconds per frame:	< 1000	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.
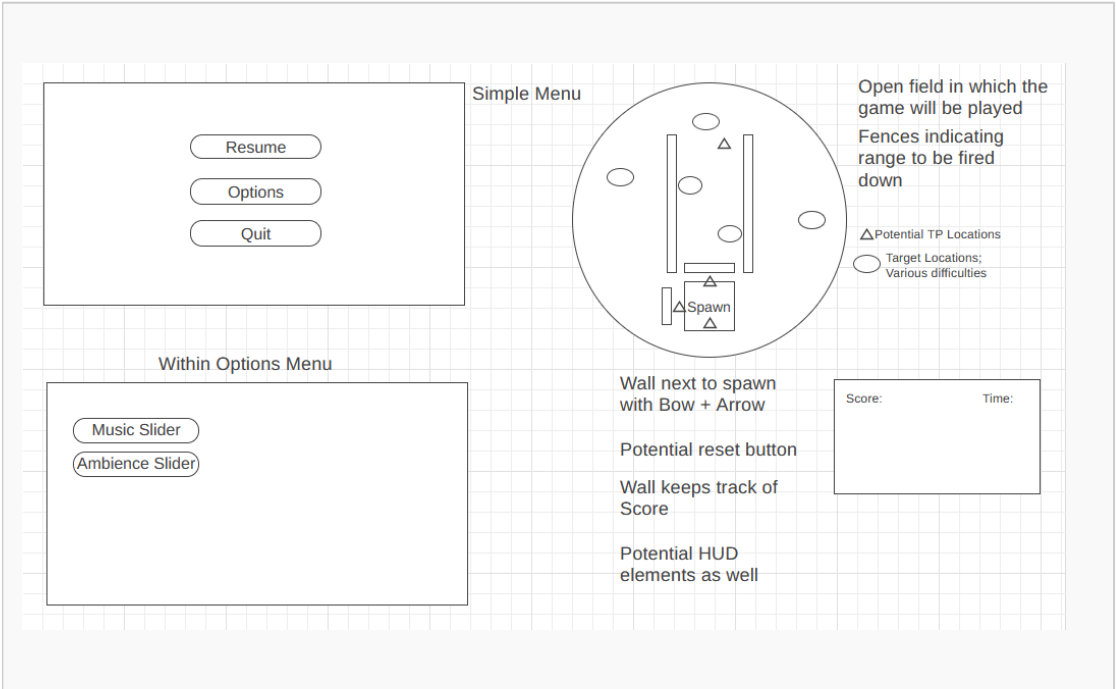
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**Other features
(Optional)**

- Optional areas to explore / look around
- Ability to retrieve arrows manually or by hitting a switch
- Tutorial
-
-
-
-
-

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**Sketch
(Optional)**

Simple Menu

Resume

Options

Quit

Open field in which the
game will be played

Fences indicating
range to be fired
down

△ Potential TP Locations

◯ Target Locations;
Various difficulties

△ Spawn

Within Options Menu

Music Slider

Ambience Slider

Wall next to spawn
with Bow + Arrow

Potential reset button

Wall keeps track of
Score

Potential HUD
elements as well

Score: Time:

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**Timeline
(Optional)**

	Milestone	Date
1	-	
2	-	
3	-	
4	-	
5	-	