

## Petra

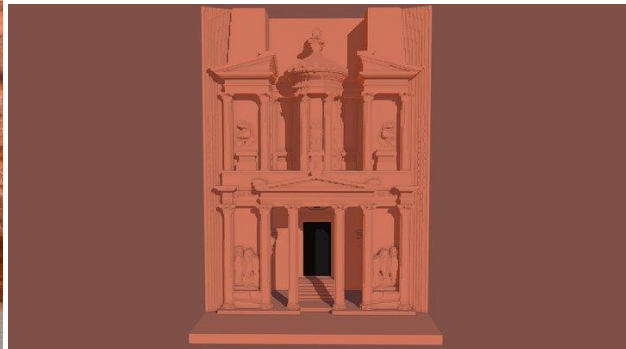
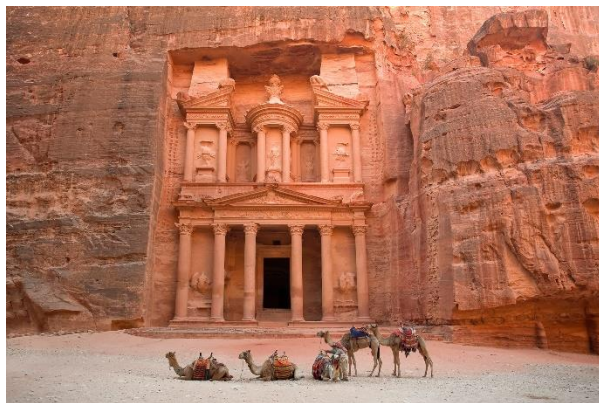
### Some information about Petra

The virtual environment I will be developing is Petra. Petra is an ancient city in Jordan that have been around for thousands of years. It has a magnificent view located in a basin surrounded by mountains forming the eastern flank of the Arabah valley running from the dead sea to the Gulf of Aqaba.

### Settings

The time that I will set for the virtual environment is early afternoon as it is the hottest period of the day. The weather will be clear with calm wind creating small sand waves the runs across Petra.

The design of virtual environment will consist of multiple different locations in Petra and perspectives. The user will be able to see different iconic infrastructures of Petra such as Royal Tombs, and the Roman Theatre. Immersing users in the timeless beauty of Petra.



In the virtual environment, I will also be incorporating some cultural context of Petra to add more depth to the user experience. This can be accomplished by adding some Nabataean traders at the scene where the user can interact with them and get items that user can carry throughout the VR experience, the language that the trader will speak will be English for user understanding.



Sound is a very important aspect of natural and realistic experiences that user will go need to experience to fully immerse themselves into the virtual world. I will be incorporating sounds like wind whistling through Petra, the source of the sound - which will be from one direction, footsteps of the user, the trader vocal interactions, also some chirping of the birds.

The intention of this VR journey is to create an awe experience from the user from the first sight of Petra to the details of the ancient buildings, realistic interactions between user and the trader, and the knowledge they learnt from the VR experience.

### Navigation

The user will be using the HTC Vive VR set to navigate and see the virtual environment. To look around in the virtual environment, the user must turn their head for the camera to turn. To move around, the user can either choose to walk around by physically moving or using the joysticks. For object interaction, the user will be pressing buttons on the Vive joysticks. Here is a diagram of how everything will work on the joysticks.





1. Movement of the player (Click will be sprint)
2. Menu/Option/Settings
3. Player look direction (This could be an option to implement) (Click will be jump)
4. Interaction with left hand
5. Interaction with right hand

In Menu, players could turn on/off the player look direction and jump option, because it could cause uncomfortable experience. By default, look direction will be turned off and jump will be turn on, but I will tell the users that those options are available.

What will the VR look like?

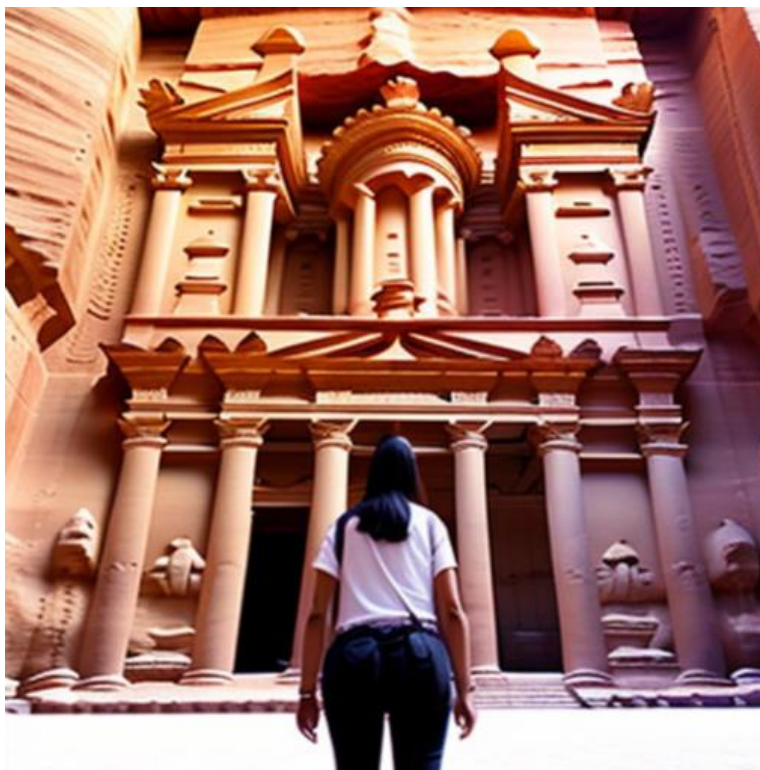
### First scene - Tutorial



The first location that the user will be placed in is a canyon that will eventually lead to Petra. The user will first be exposed to the unique landscape and environment.

This will also be the tutorial of how to use the VR set. So, the user will be learning how to talk, interact, turn their heads and all the buttons and movements that the user can use during the virtual reality experience.

### Second scene - Petra



This will be the main scene of the virtual reality experience. In this location, the user will be fully immersing themselves into the world of Petra, standing in front of the ancient building. They will be able to walk around to see Petra in different angles.

There will also be traders at the side of the Petra selling rugs, this is to make the virtual reality more fun and enjoyable for the user instead of only walking and looking around the virtual reality.





This is a demonstration of the trader that I will be using in the virtual reality. So, the trader will be setting under the tent and selling rugs. So this will be some of the only interactions that the user can make during the game

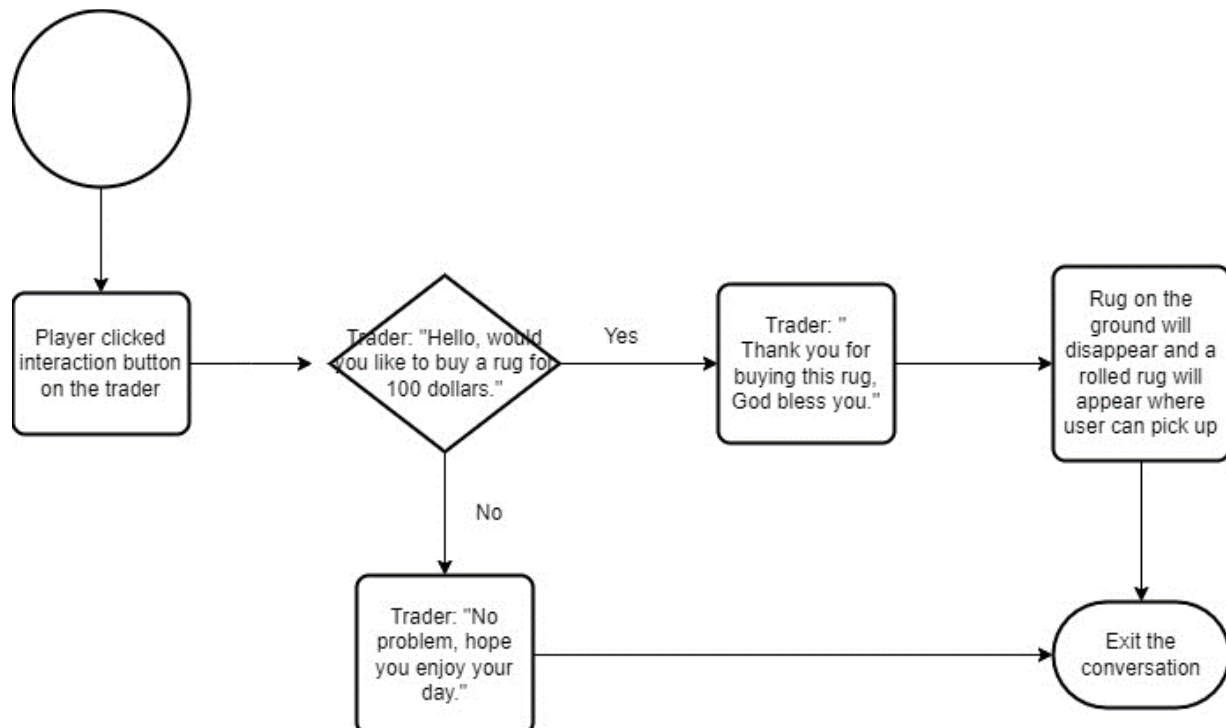
### Interaction

So, the user can talk to the trader by clicking the interaction button. The trader will greet and say words like "Would you like to buy a rug for 100 dollars?". These words are either spoken or I will have a dialog bubble indicating the text. If the user says yes, then the rug will disappear from the floor and a

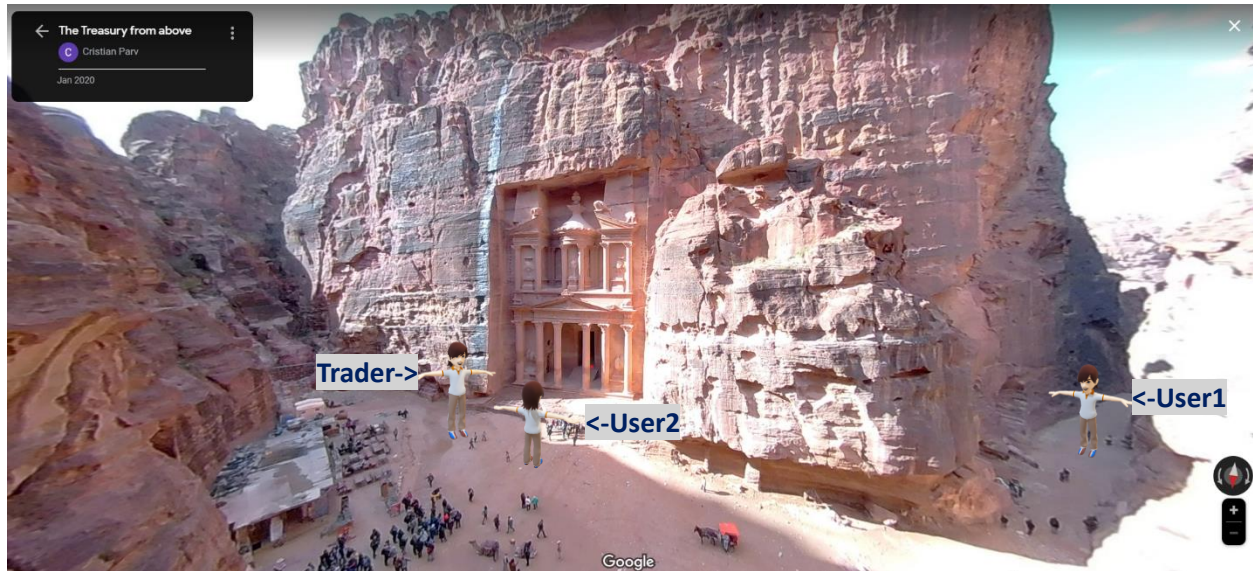
rolled-up rug will appear in front of the user for them to pick up.

Note: The user cannot pick up the rug if he/she didn't accept the purchase

How will the interaction look like:



A wide view of where everything will happen.



User1: This is where the user will start the tutorial in learning the basics.

User2: This is where the user will start the actual Petra virtual reality experience.

Trader: This is the location of the trader

Note: The user will not walk from user 1 location to user 2 location. This is to prevent time being wasted from walking, instead, after the user completed the tutorial. They will be teleported from tutorial location to the front of Petra where the user can walk and interact with the trader.

### How the game will end:

So the game will have a time limit set to 15 minutes when the user can explore and have fun. They can also manually exit the game by going to the menu and click exit game.

### Beyond the scope

If time allows, I will also develop the inside of the Petra, if I do not have a scan of Petra from inside. Then I will try recreating one myself.

I will also try to create more people where the user can interact with, such as tourist, more traders, tour guides and so on.