



Global Research Conference (GRaCe 2020)



# **VIRTUAL TOURISM: THE DESIGN CONCEPT OF AN AUGMENTED REALITY PORTAL FOR PROMOTING MALAYSIA ETHNIC CULTURE (A CASE STUDY OF SARAWAK CULTURAL VILLAGE)**



# Problem Statement

- Virtual Tourism utilizes the natural attractions to those who are unable to travel physically but intend to experience different places (Huh & Singh, 2007). It is explained that why people are more attracted to virtual tourism as it gives an experience to the real world compared to non-virtual tourism.
- Tourists nowadays aim to experience the culture of the region they are visiting of which tourism causes genuine, meaningful interactions between cultures (Rojek and Urry, 1997 as cited in Hanita Hassan, 2014).
- Based on current observation, “Augmented Reality has proven so far to be a technology that can provide tourists, and citizens of course, with much more personalized content and services tailored to their particular needs” (Chris, Anna, & Efpraxia, 2012).
- Hence, this Augmented Reality for Sarawak Cultural Village Mobile Application is proposed and developed to enhance tourist experience in viewing the application in 3D images visualization.

# Objectives



- To identify the user requirements of Augmented Reality for Sarawak Cultural Village.
- To design the interface and function of Augmented Reality for Sarawak Cultural Village.
- To develop and demonstrate Augmented Reality for Sarawak Cultural Village.



# Project Scope

- The main scope of this project is to focus on tourist that visit the Sarawak Cultural Village to view the 3D animation and experience the environment inside the veranda of bidayuh village.
- The project will be focus on development of 3D visualization image inside the bidayuh village and 3D animation of people inside the house.
- The project are using marker based tracking technique by using mobile camera to capture the image target of plane in physical world and the application will visualize the 3D images in the screen.





# Project Significant

- Potential tourists.
  - *Enhancing the tourist experience while visiting the Sarawak Cultural Village.*
- Company of Sarawak Cultural Village.
  - *Increase and boost the sale profit since the Augmented Reality is a new dimension in showing the 3D visualization that teaches the information and gives excitement to the tourist.*
- Augmented Reality Designer and developer.
  - *Give benefit from the project to the designer and developer.*

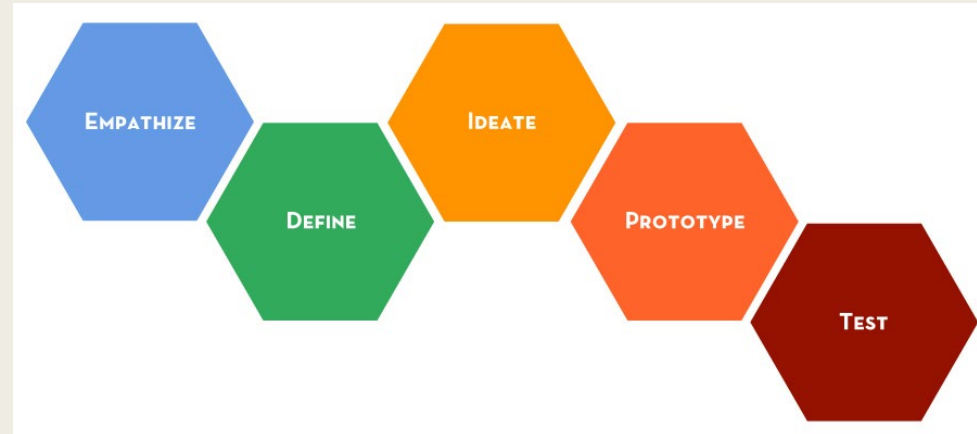
# Design Requirement for Augmented Reality Sarawak Cultural Village Mobile Application:-



Augmented Reality Sarawak Cultural Village design features and function	Description
3D Images modelling	The application provide visualization in 3D images of different kind of people in the village.
Sound	The user are enable to hear the environment sound within the Sarawak Cultural Village.
3D animation	The augmented reality application has 3D animation feature which is users can view through the details of the model movement inside the village.
Interactive information	Allow users to learn every single information through the application by single click of the designated area.
Tracking technique (plane target using ARCore)	ARCore enable smartphone to detect the environment of the camera, comprehend the world and associate with the data. It use motion tracking, environmental understanding and light estimation to integrate virtual content and real world. Once the plane is detected, the application will track the 3D images and animation as long as it is at least partially in the camera's field of view.



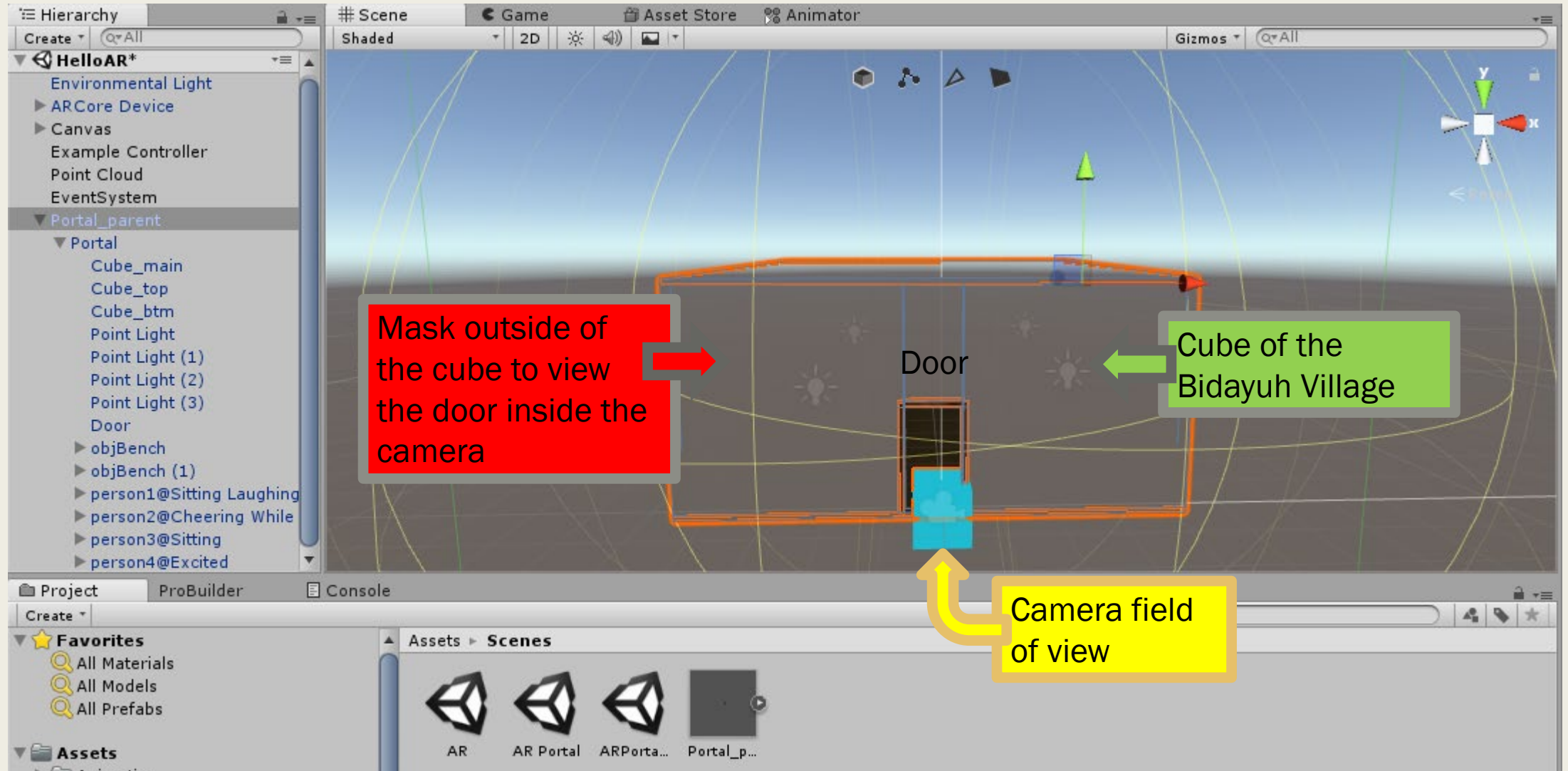
# Project Methodology

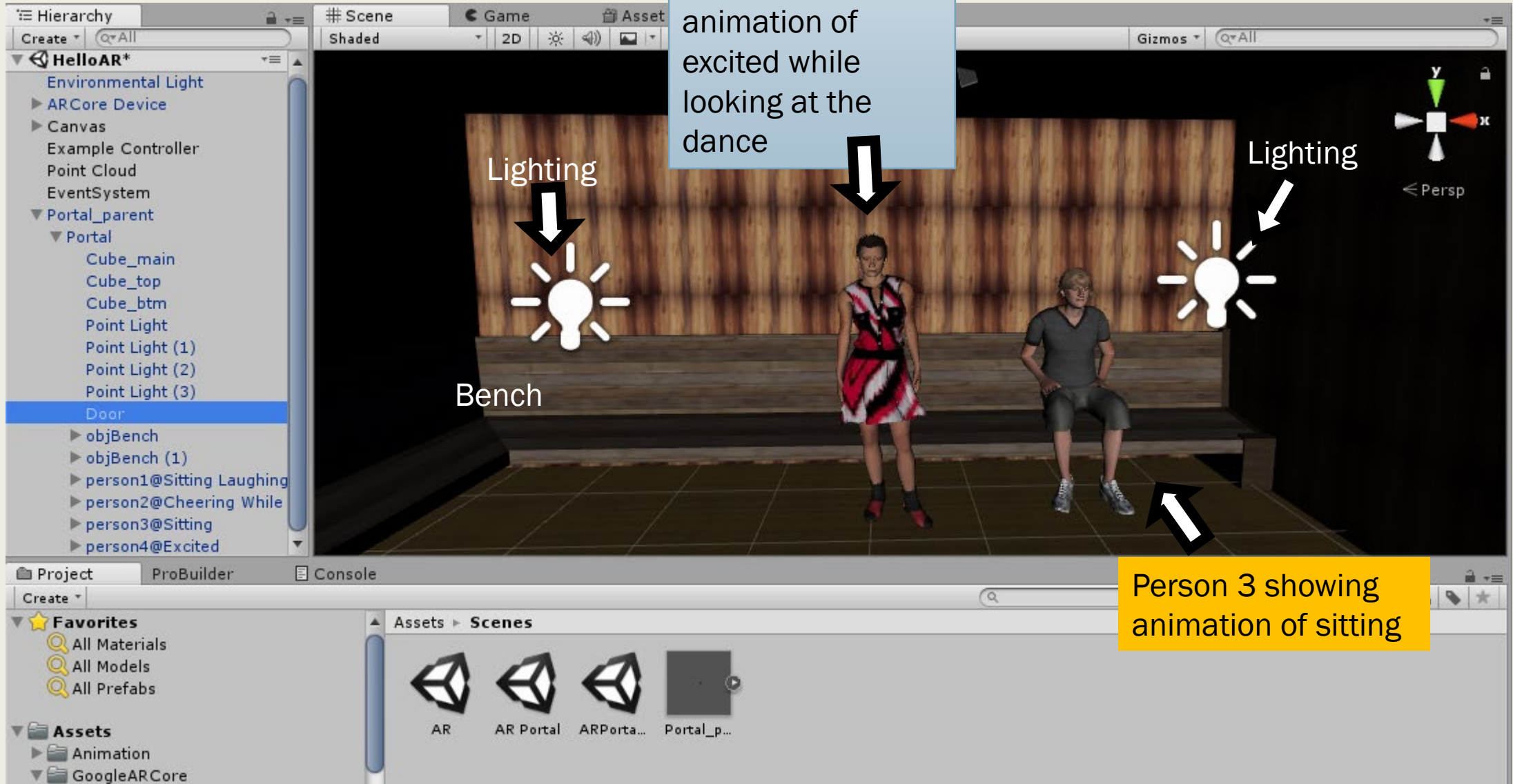


- The methodology that will be used in the project is the Design Thinking methodology. The phases that is included in Design Thinking Methodology are Empathise, Define, Ideate, Prototype, and Test.



# UI Storyboard





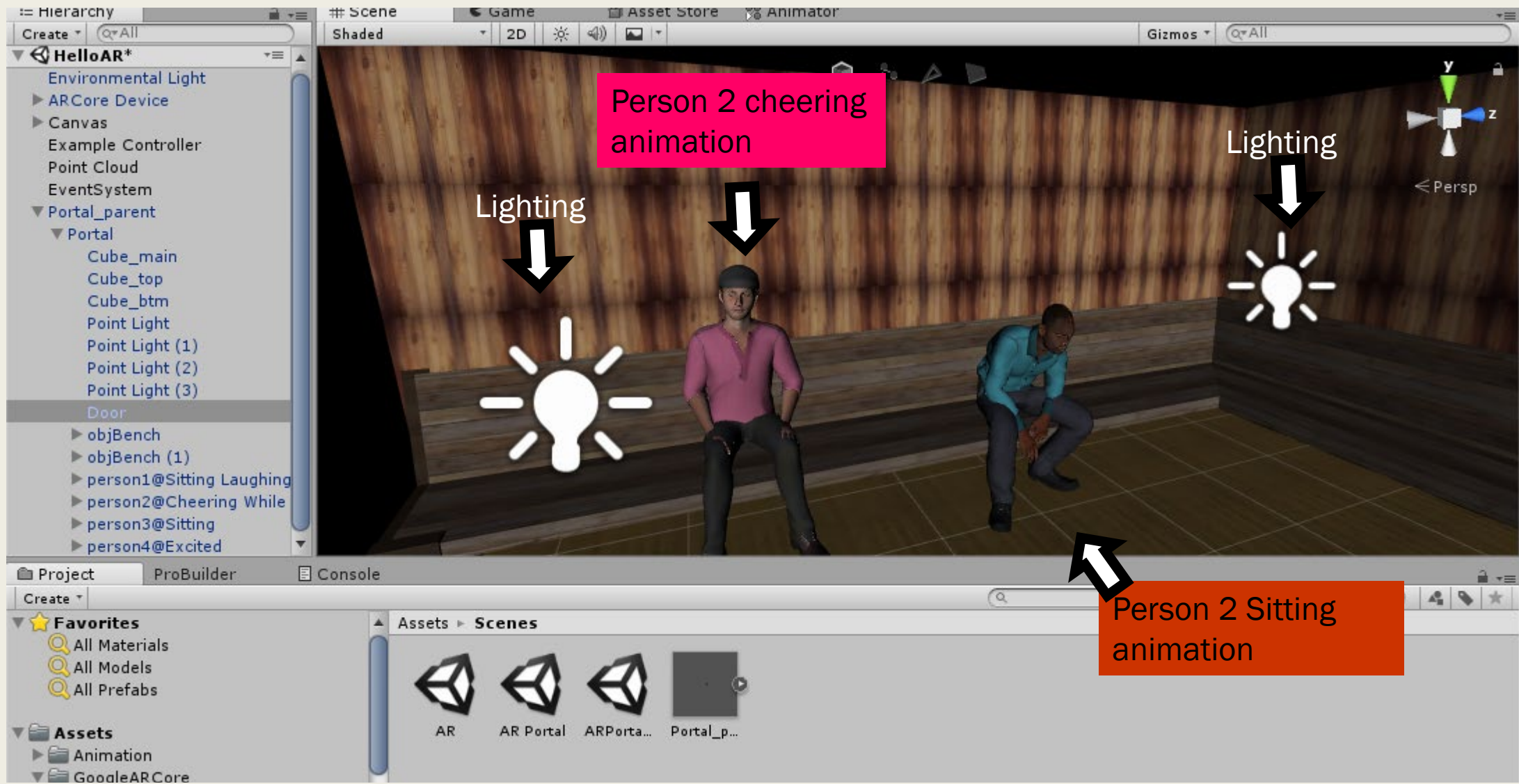
Person 4 showing animation of excited while looking at the dance

Lighting

Lighting

Bench

Person 3 showing animation of sitting



Thank You!