NETAJI SUBHAS UNIVERSITY OF TECHNOLOGY
NEW DELHI

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Augmented Reality

COCSE57

Practical File

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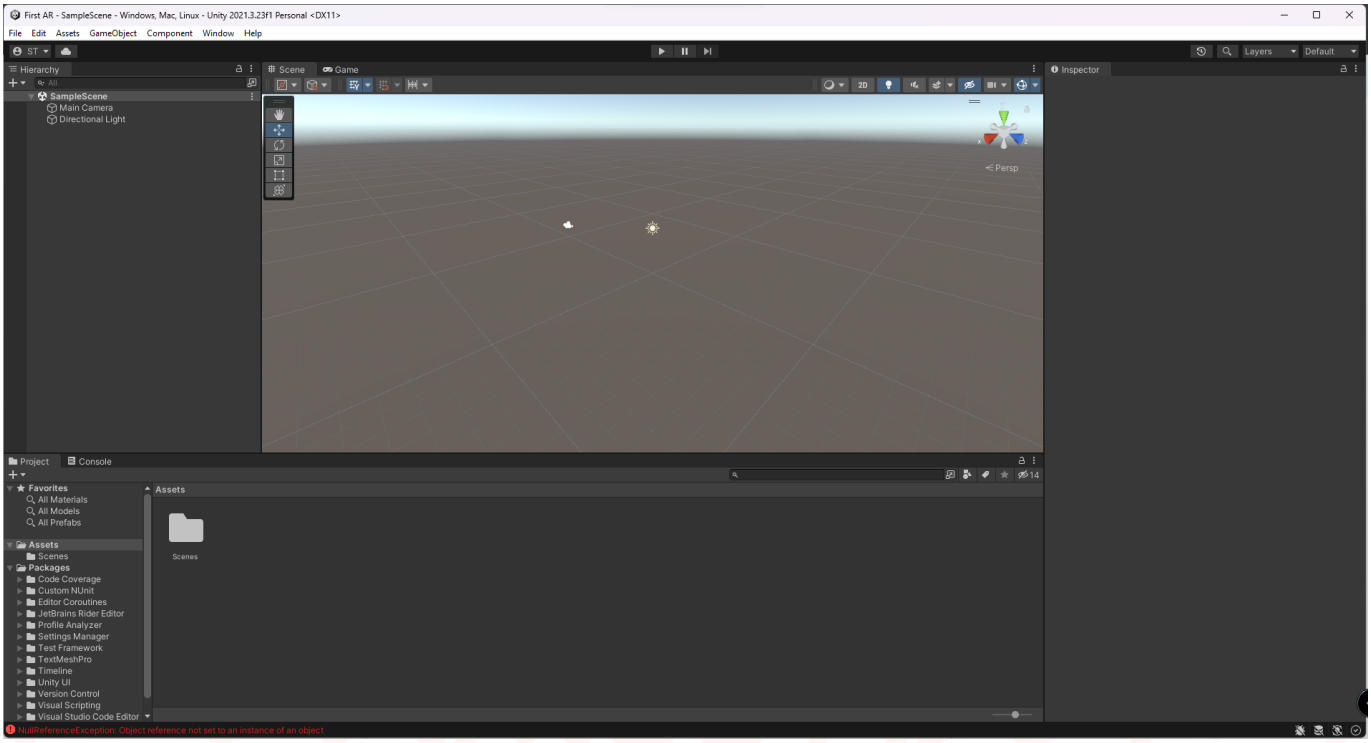
INDEX

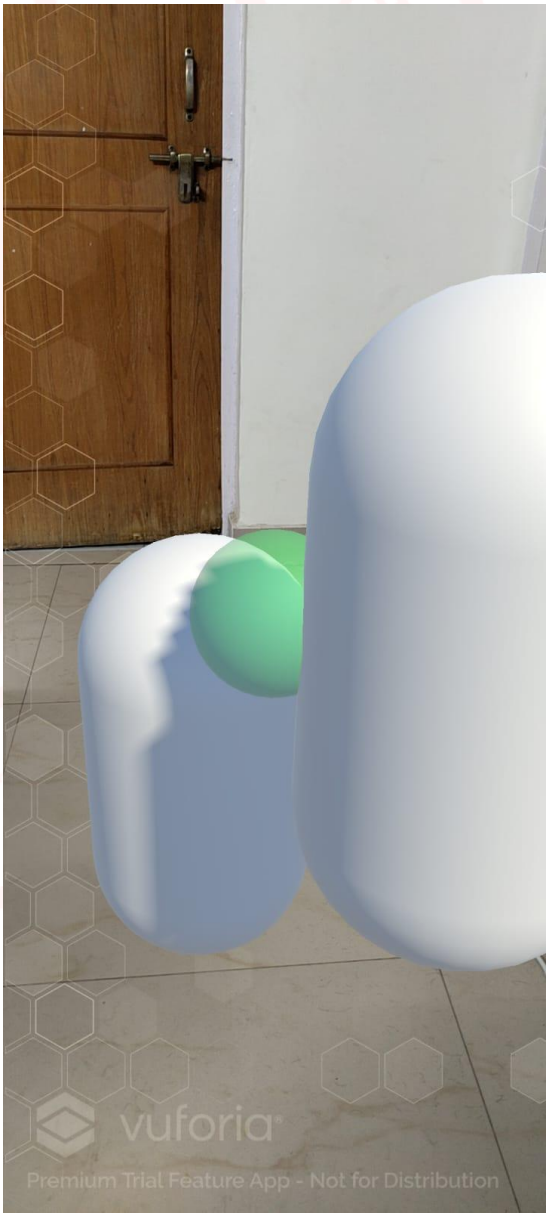
S.No.	Problem Statement	Page No.
1	Installation and basic understanding of Unity software for Augmented Reality	2
2	Build an Augmented Reality application having 3D objects in it using Unity	3
3	Build an Augmented Reality application having Placement Indicator in it to summon 3D objects in it using Unity	4
4	Build an Augmented Reality application using Unity for inserting multiple AR objects	5
5	Build an Augmented Reality application using Unity for summoning multiple AR objects	6
6	Build an Augmented Reality application using Unity to use arrows as placement indicator to summon multiple AR objects	7

Installation and basic understanding of Unity software for Augmented Reality



Build an Augmented Reality application having 3D object in it using Unity.

1. We create a new unity project
2. We add the following components
    a. Vuforia AR Camera
    b. Vuforia Mid Air Stage
    c. Vuforia Mid Air Positioner
3. 3d Model of the virtual object as a child of the Mid Air Stage Component
4. Build the Application and run the app on your phone

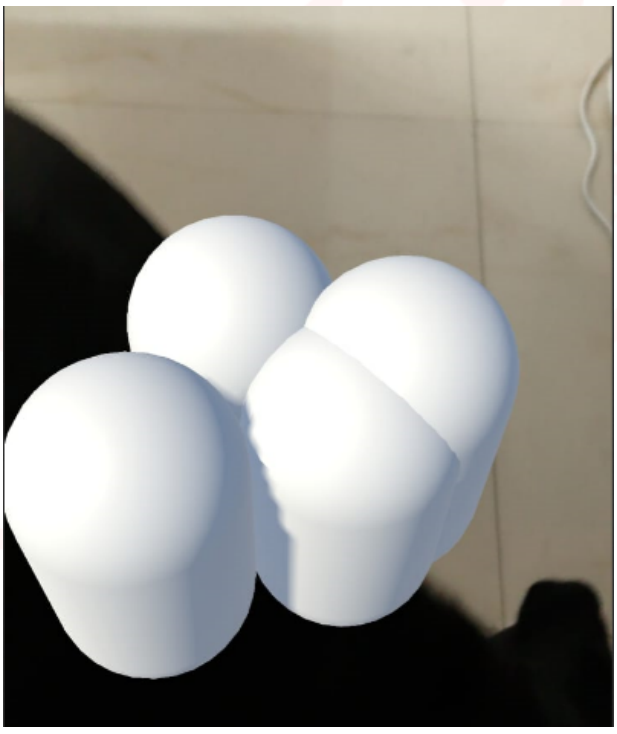


Build an Augmented Reality application having Placement Indicator in it to summon 3D object in it using Unity

1. We create a new unity project
2. Import ARCore and ARKit in the unity project
    a. Add the AR Session Origin Game Object
    b. Add the AR RayCast Component to it
    c. Add the AR Plane Manager Component to it
3. Add the AR Session Game Object
4. Add an Event System to Handle the inputs
5. Create a Placement Indicator Game Object
6. Add a 3d quad shape as its child
    a. Change the material of the quad to a target image
7. Add a controller object, which will interact with the AR session origin to display the virutal object.
    a. Add an AR Placement Script to the virtual object with C# script
    b. To the Controller now add the 3d object that we want to display
8. Build and run the application

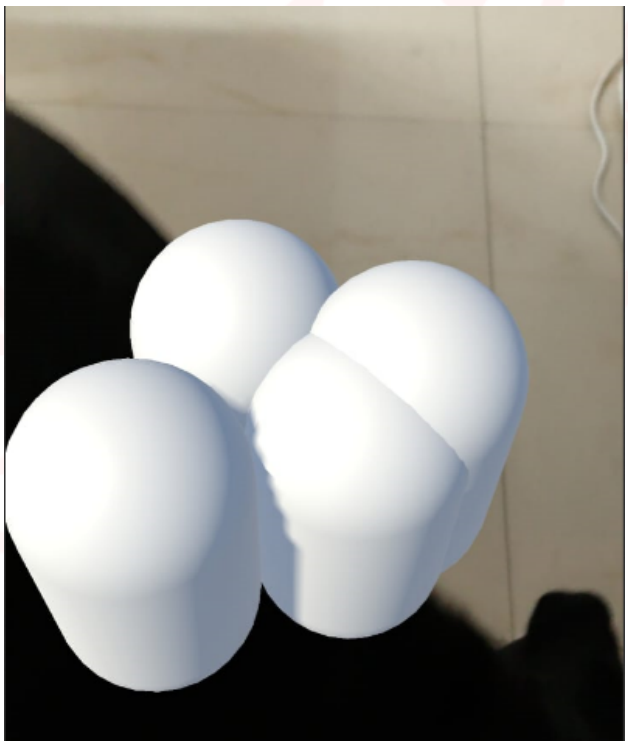
Build an Augmented Reality application using Unity for inserting multiple AR objects

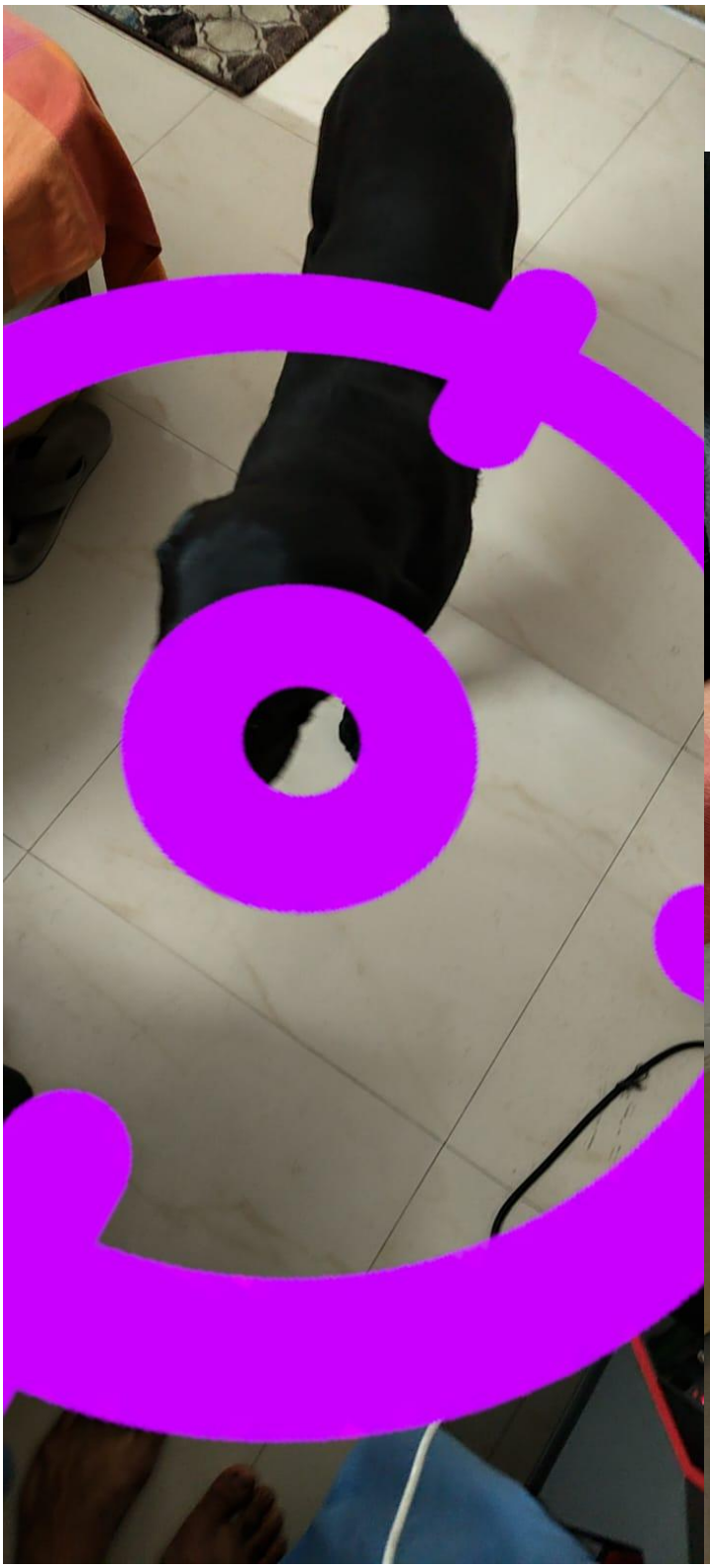
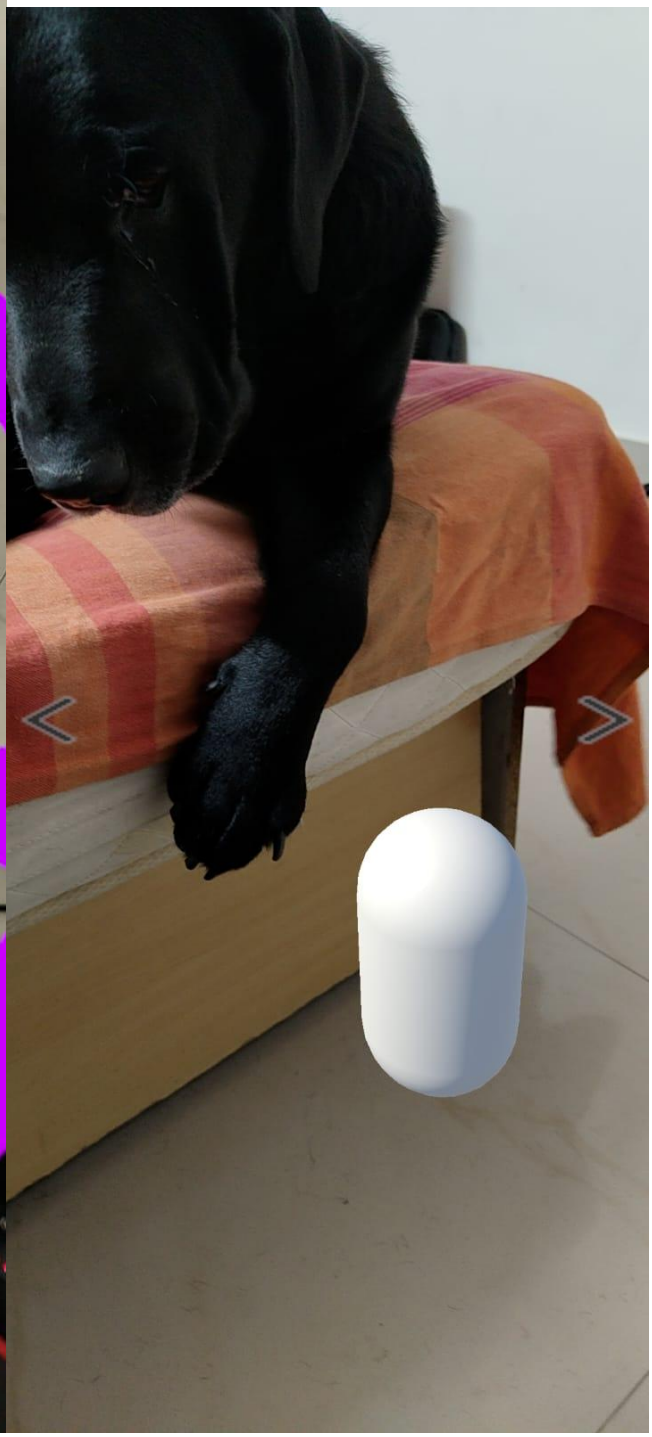
1. We create a new unity project
2. Import ARCore and ARKit in the unity project
3. Add the AR Session Origin Game Object
    a. Add the AR RayCast Component to it
    b. Add the AR Plane Manager Component to it
4. Add the AR Session Game Object
5. Add an Event System to Handle the inputs
6. Create a Placement Indicator Game Object
    a. Add a 3d quad shape as its child
    b. Change the material of the quad to a target image
7. Add a controller object, which will interact with the AR session origin to display the virutal object.
    a. Add an AR Placement Script to the virtual object with c#
    b. Add the 3d object that you wish to insert in the controller
8. Build and run the application



Build an Augmented Reality application using Unity for summoning multiple AR objects

1. We create a new unity project
2. Import ARCore and ARKit in the unity project
3. Add the AR Session Origin Game Object
    a. Add the AR RayCast Component to it
    b. Add the AR Plane Manager Component to it
4. Add the AR Session Game Object
5. Add an Event System to Handle the inputs
6. Create a Placement Indicator Game Object
    a. Add a 3d quad shape as its child
    b. Change the material of the quad to a target image
7. Add a controller object, which will interact with the AR session origin to display the virutal object.
    a. Add an AR Placement Script to the virtual object with C# code
    b. Add the 3d object that you wish to insert in the controller
8. Build and run the application



Build an Augmented Reality application using Unity to use arrows as placement indicator to summon multiple AR objects

1. We create a new unity project
2. Import ARCore and ARKit in the unity project
3. Add the AR Session Origin Game Object
    a. Add the AR RayCast Component to it
    b. Add the AR Plane Manager Component to it
4. Add the AR Session Game Object
5. Add an Event System to Handle the inputs
6. Create a Placement Indicator Game Object
    a. Add a 3d quad shape as its child
    b. Change the material of the quad to a target image
7. Add a controller object, which will interact with the AR session origin to display the virutal object.
    a. Add an AR Placement Script to the virtual object with the following c# code
    b. Once the script is added, add the 3d models that you wish to cycle through.
8. 8. Create a Blank Canvas, which will contain the arrows
    a. Insert buttons as children of the blank canvas
    b. Change the target image of the buttons to arrow
    c. Now update the runtime behaviour of the arrows
9. Build and run the application