

Practical 10

AIM:- Creating AR Content with Vuforia.

Augmented Reality and Virtual Reality are reality technologies that either enhance or replace a real life environment with a simulated one.

- Augmented Reality (AR) augments your surroundings by adding digital elements to a live view, often by using the camera on a smartphone.
- Virtual Reality (VR) is a completely immersive that replaces a real-life environment with a simulated one.

★ Steps to Perform Practical:-

- 1) Create a new project in unity and select 3D and name it AR using vuforia.
- 2) Go to the link "developer.vuforia.com" & Register. Enter the details asked & click on create a account.
Verify your details by going to the link on email.
Login to vuforia account.
- 3) Go to downloads → Sample.
Click on download from Unity Store.
A new tab opens of Unity Asset Store.
- 4) Go to Vuforia Engine SDK → Add to My Assets → Open in Unity.
- 5) A packet manager appears. Click on Import.
- 6) Now go to assets store and select Vuforia Core Sample → Add to My Asset → Open in Unity → Import.
- 7) To verify whether vuforia is imported successfully, right click on Hierarchy Window Panel. If you see vuforia engine in the dropdown list, it means that vuforia is imported successfully.
- 8) Delete the "Main Camera" from the scene. Right Click on Hierarchy Panel → Vuforia Engine → AR Camera.
- 9) In the Project Window go to Asset/Resources and Double Click

on "VuforiaConfiguration.asset", to view it's property in the Inspector Panel.

10) Click on Add License on the Inspector Panel. vuforia.com opens

11) Click on License Manager → Get Basics

12) Keep the license name same as the Project name i.e AR using vuforia. Check the terms and condition & Click on confirm.

13) Click on license & copy the license key and paste it in the app license key.

14) Go to vuforia → Target Manager → Add Database & Write your Database Name and select Device → Create

15) After creating database, open the database & click on Add Target.

16) Click on Image → Browse and select an image → Width: 0.5 → Name: Stones-Image → Add.

17) Repeat step 15 & 16 until you get 4-5 star ratings.

18) Click on download database → Unity Editor → Download. Once it downloads you can get the file called helloworldvuforia.unity package. Double click on this file to open the unity, now you'll get a prompt, Click on Import.

19) Go to Asset/Resources & double click on vuforiaconfiguration.asset → Inspector Panel → Databases.

There you would see helloworldvuforia listed. This means that you have successfully imported database in your Unity Project.

20) Right Click on Hierarchy Panel → Vuforia Engine → Image Target. Select the Image Target to view this property in the Inspector Panel.

21) Go to Image Target behaviour Script. Right Click on Image Target → 3D Object → Cube.

Scale :- X:-0.2 Y:-0.2 Z:-0.2

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- 22) Move "your box slightly up to your surface to make it appear levitating.
- 23) Click on Play Button to run the Scene on the top center using your web cam.