

Programming HW 3

Image Tracking

Task

- Open Unity, and load the project at the root of the given folder. Open scene 'PHW3/PHW3_scene'
- Install ARCore Extensions Package
- Check the unity setting refer to TA's ARCore Tutorial & Additional Guidance
- All you need can be found in Asset/PHW3

1. [TO DO #1] Create your own Reference Image Library

1. [TO DO #2] Augment prefabs for target images

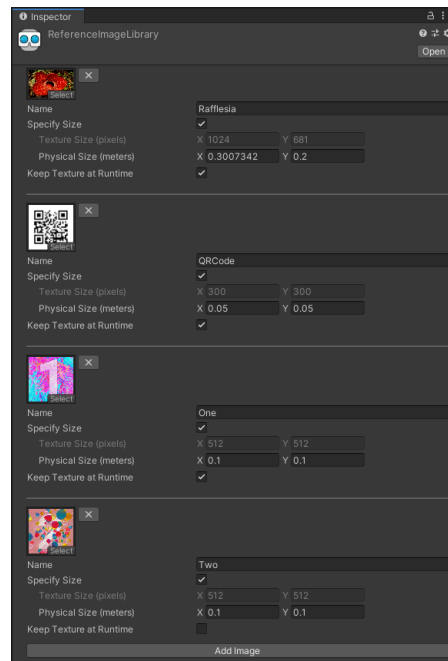
- a. Assign different prefabs for each image
- b. Implement switching module in 'PrefabChangeManager.cs'

1. [TO DO #3] Augment image information to a specified location

- a. Augment info. to the edge of the target image

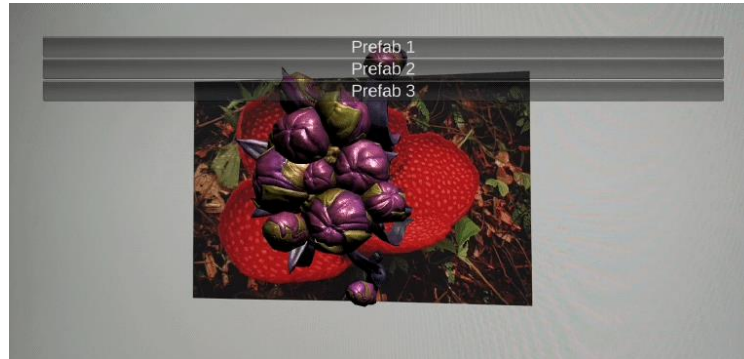
1. Create your own Reference Image Library

- To enable image tracking, you must create an XRReferenceImageLibrary.
- Follow the link for instructions on creating one.
 - <https://docs.unity3d.com/Packages/com.unity.xr.arsubsystems@4.1/manual/image-tracking.html>
- Create your own Image Library that contains images to track.
 - At least 3 images
 - Tips for selecting reference images:
 - (<https://developers.google.com/ar/develop/unity-arf/augmented-images>)



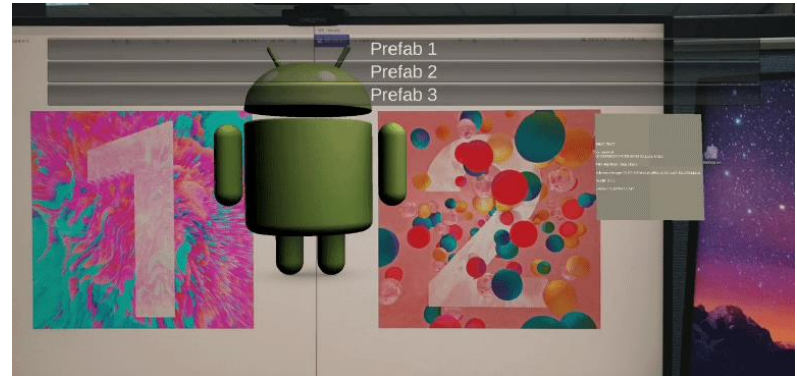
2. Augment prefabs for target images

- Set your ImageLibrary to 'AR Session Origin > Prefab Image Pair Manager'
 - If the 'prefab list' doesn't show, click another object and then watch it again.
- Assign different prefabs for each target image
- Implement switching module in 'PrefabChangeManager.cs' and 'PrefabImagePairManager.cs'
 - Implement switching function for a single image
 - The augmented prefab needs to be switch by clicking the button
 - 'Switch' means that while creating a new prefab, the old one must be destroyed



3. Augment prefabs to a specified location

- As a result of the implementation so far, each prefab will be augmented in the center of the image
 - Now you need to augment prefabs to the edge of the target image (depend on image size)
 - Set one of image's pairing prefab to the given 'ImageInfoPrefab'
 - Write TODO #3 parts in 'PrefabImagePairManager.cs'
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- Note: The augmented prefab must be positioned on the same 2D plane as the target image



Deliverables

1. Record the screen running the app on your device
2. While running the app, include features as below,
 - a. Show tracking result for each image (at least 3)
 - b. Switch prefabs for a single image
 - c. Show the augmented prefab's 3D position by rotating the device camera
 - i. Including side view and front view of the image-prefab

1. Submit PrefabChangeManager.cs & PrefabImagePairManager.cs & video file as .zip file on KLMS

Release date : 9.28

Due date : 10.11 11:59