Game and XR Development with Unity

Session 20
09 October 2022

Course Objectives

01 ...

Unity Basics

- Tool
- Interface
- Best Practices

02 ...

C# Scripting

- Basics
- Unity related functions
- Best Practices

03 ...

Game Development Basics

- Effects
- Animations
- Gameplay Mechanics

04

VR & AR Development

- XR Development
- Production Pipeline
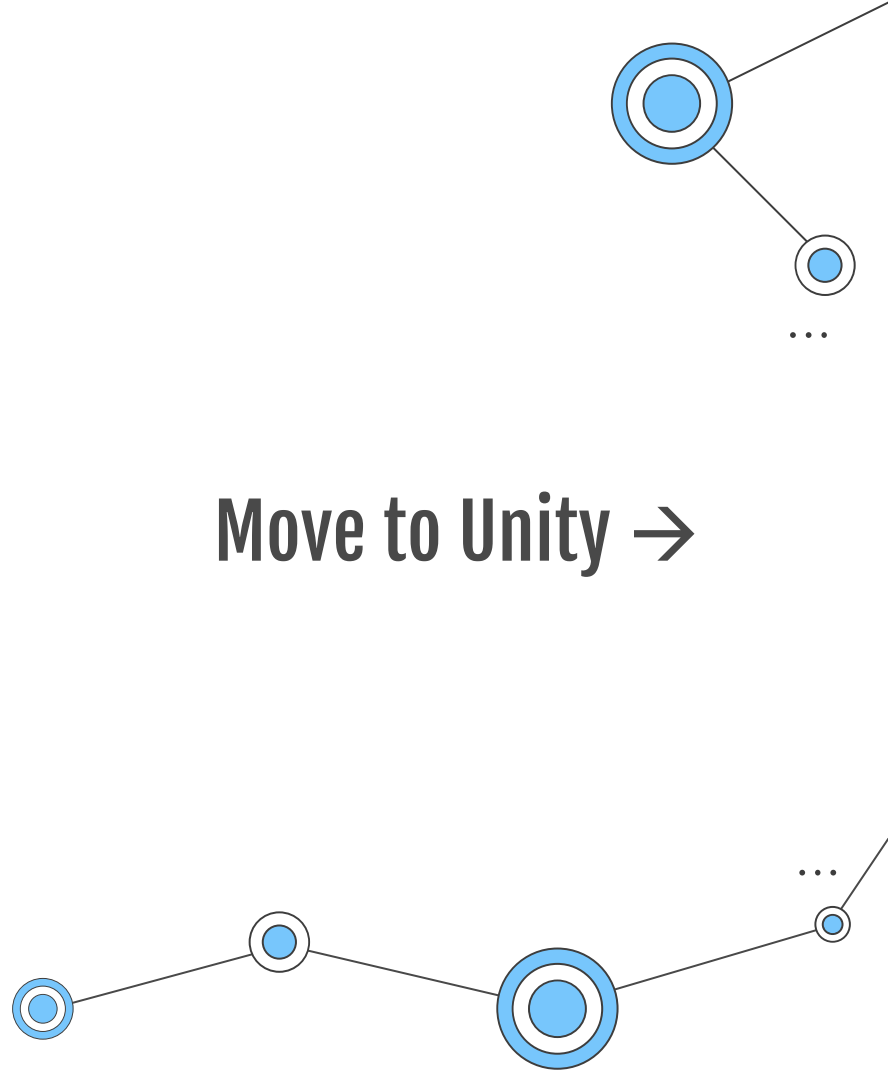- Portfolio Projects

Complete Outline

Session Objectives

- **Shooter Games**

- Concept of Headshot
- Health Bar

- Pickup System
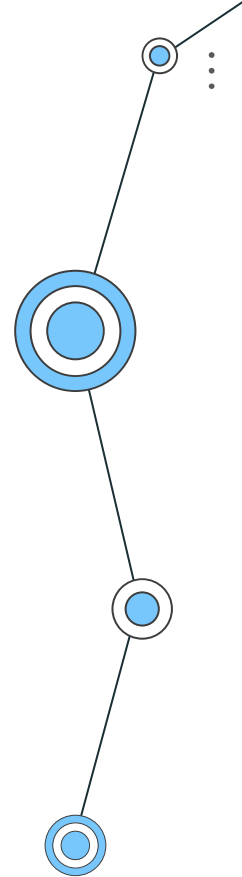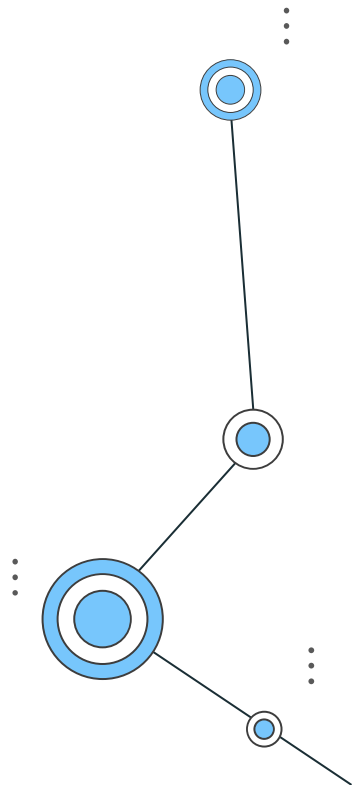- Player Respawn
- Data Save (Basic)

Move to Unity →

Thanks!

Do you have any questions?

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Portfolio Project – GameDev

Plan the Scope

Game Design Document

- Ref

Develop

Publish

Detailed Plan

Augmented Reality

- superimposes a computer-generated image on a user's view of the real world
- enhances natural environments or situations and offer perceptually enriched experiences

Session Objectives

Unity's AR Foundation
Supported Features

| Functionality	ARCore	ARKit	Magic Leap	HoloLens
Device tracking	✓	✓	✓	✓
Plane tracking	✓	✓	✓	
Point clouds	✓	✓		
Anchors	✓	✓	✓	✓
Light estimation	✓	✓		
Environment probes	✓	✓		
Face tracking	✓	✓		
Meshing			✓	✓
2D Image tracking	✓	✓		
Raycast	✓	✓	✓	
Pass-through video	✓	✓		
Session management	✓	✓	✓	✓

- **Augmented Reality**

- AR & XR Packages in Unity
- Setting up an AR Project

Reference Docs
About AR Foundation
AR Foundation Samples
AR foundation Demos
ARCore supported devices

Render Pipelines

Built-in Pipeline

Universal Render Pipeline (URP)

High Definition Render Pipeline (HDRP)
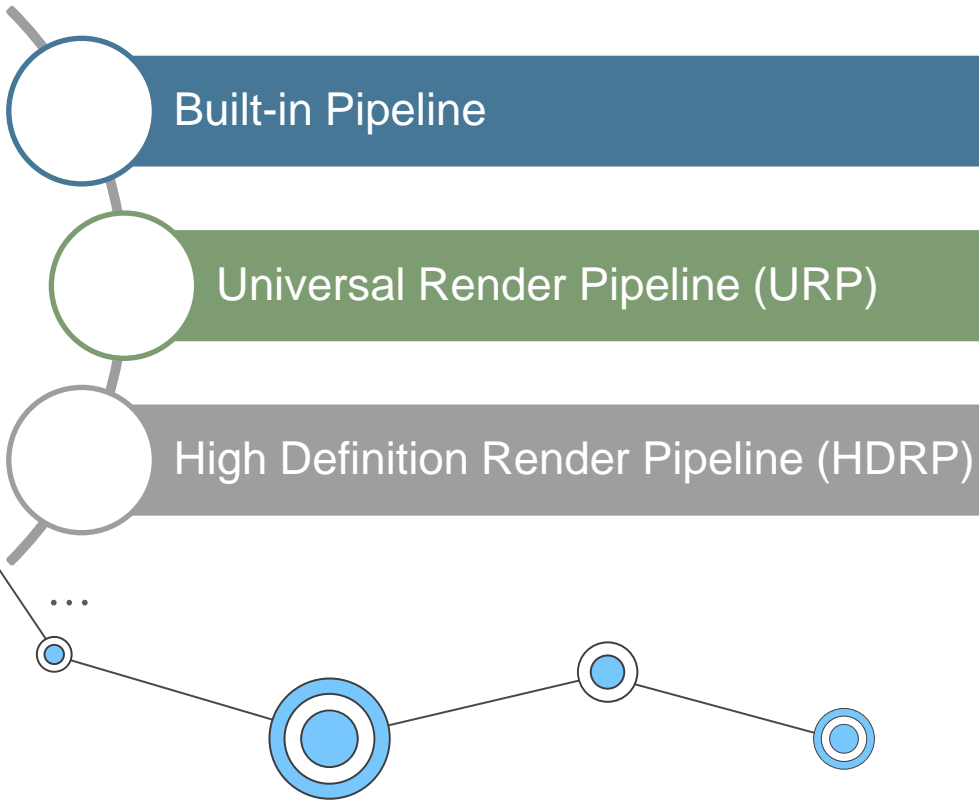
A render pipeline performs a series of operations that take the contents of a scene and displays them on a screen.

Reference