

Unity Certified User: VR Developer Training

Course Introduction:

Welcome to the Unity Certified User: VR Developer Training course. This program is designed to provide you with the skills and knowledge necessary to create immersive virtual reality experiences using Unity, the leading platform for VR content development. Throughout the course, you will gain hands-on experience in VR design, understand the technical aspects of VR environments, and learn to develop interactive and engaging VR applications. Prepare to enhance your proficiency as a VR developer and ready yourself for the Unity certification exam.

Module 1: Basic Unity Concepts for VR Development

- **Essential VR Concepts:** Define key VR concepts, including stereoscopic vision, differences between VR and other XR forms, tracking methods, and VR input methods.
- **Unity Package Manager:** Learn to manage packages using the Package Manager, focusing on the XR Interaction Toolkit.
- **Asset Management:** Demonstrate how to import or modify assets, including Prefabs.
- **Transform Component Usage:** Understand how to use the Transform component to position, rotate, and scale objects in the scene.
- **Interface Navigation:** Identify the primary interface windows for tasks in the default workspace.
- **Inspector Window Management:** Manage components effectively within the Inspector Window.

Module 2: Building a Scene for VR

- **Preplanning Techniques:** Explore preplanning methods such as design documents, flow charts, animatics, character model sheets, prototyping, greyboxing, storyboarding, concept art, and proportional level scaling.
- **Environment Design:** Implement environment design with 3D objects using finalized assets.
- **Lighting in VR:** Identify different types of lighting and when to use Baked vs Realtime lighting.

Module 3: UX Implementation for VR

- VR UI Creation: Steps to create a basic UI using World Space for a VR scene, including Canvas, Button, Image, Text, and the Event System.
- Object Manipulation: Determine the components needed for users to physically manipulate objects, including Colliders, XR Grab Interactable, and Rigidbodies.
- Player Locomotion: Identify types of player locomotion, including degrees of freedom, moving an avatar, 3-axis motion, 6-axis rotation, and rotating along an axis.
- VR Interaction Safety: Identify optimal VR interactions considering health and safety.
- Audio Attributes: Differentiate between attributes of audio sources, including 2D and spatial audio.

Module 4: Scripting with Unity

- Basic C# Programming: Select the appropriate C# code to achieve goals using properties, variables, methods, basic data types, or binary operators.
- Unity Classes: Choose the appropriate Unity class for specific goals, including Vector3, GameObject, Collider, Rigidbody, or AudioSource.
- Collision Handling: Identify methods to handle collision or trigger Enter, Stay, or Exit events.

Module 5: Troubleshooting and Playtesting

- Problem Identification: Identify areas to troubleshoot during playtesting, such as Static objects, missing Colliders, missing Rigidbodies, incorrect settings, Is Trigger, Is Kinematic, or Use Gravity.
- Console Logs: Identify types of logs in the Console.
- Error Resolution: Recognize errors in the Console and the steps to fix them, including null references, missing end of line markers, or syntax errors.
- Optimization Methods: Apply correct optimization methods for VR scenes, including camera occlusion culling, removing unused objects, or using level of detail (LOD).

Module 6: VR Project Development and Deployment

- Project Planning and Management: Understand the importance of planning and managing VR projects, including time and resource allocation.
- Deployment and Publishing: Learn the steps to deploy and publish your VR application on different platforms.

Module 7: Preparing for the Unity Certified User: VR Developer Exam

- Exam Overview and Preparation: Familiarize yourself with the format and content of the Unity Certified User: VR Developer exam.
- Practice Tests and Review: Engage in practice tests and reviews to assess your knowledge and readiness for the certification exam.

Conclusion:

This course has been designed to provide a comprehensive understanding of VR development using Unity. By the end of this training, you will be prepared to create professional-grade VR applications and successfully pass the Unity Certified User: VR Developer exam. Embrace the skills and concepts learned to advance your career in the growing field of virtual reality.

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step forward