Final Year B. Tech. CSE Augmented Reality and Virtual Reality

# Assignment No. 3

**Submitted by:**

|  |  |
| --- | --- |
| **PRN** | **1032210790** |
| **Student Name** | **Vansh Gurnani** |

**Title: Installation of Unity and Setting It Up for VR Application Development**

**Aim**

To understand the steps for installing Unity and preparing it for developing Virtual Reality (VR) applications.

**Theory**

**Introduction to Unity**

Unity is a popular software used for creating games, AR (Augmented Reality), and VR (Virtual Reality) applications. It is widely used by developers due to its ease of use, powerful features, and cross-platform compatibility.

**Key Features of Unity**

* **Cross-Platform Development**: Create applications that work on different devices, including VR headsets, mobile phones, and PCs.
* **Real-Time Rendering**: See changes immediately as you design your application.
* **Asset Store**: Access a library of 3D models, textures, and scripts to speed up development.
* **Scripting Support**: Use C# programming to control how objects behave in your app.
* **VR and AR Tools**: Includes built-in support for developing immersive VR and AR experiences.

**Steps to Install Unity and Set It Up for VR Development**

1. **Download Unity Hub**:
   * Go to Unity's official website and download Unity Hub, a tool to manage Unity installations and projects.
2. **Install Unity Editor**:
   * Open Unity Hub, log in or sign up, and install the Unity Editor version recommended for VR development.
   * Ensure you check the box for VR/AR support during the installation process.
3. **Set Up a New Project**:
   * Open Unity Hub and create a new project. Select a 3D template for VR development.
4. **Install Required SDKs and Plugins**:
   * Install VR SDKs (like Oculus SDK or SteamVR) and ensure your system meets hardware requirements for VR.
5. **Configure VR Settings**:
   * Open the **Player Settings** in Unity, enable the VR option, and select the headset or platform you want to develop for (e.g., Oculus, HTC Vive).

**Conclusion**

Thus, we have understood the steps for installing Unity and setting it up for VR application development.

**FAQs**

1. **What is Unity?**  
   Unity is a software platform used to create interactive 2D and 3D applications, including games and VR experiences.
2. **What are other tools for creating AR/VR applications?**  
   Some alternatives are Unreal Engine, Godot, and Amazon Sumerian.
3. **What is Unity Hub?**  
   Unity Hub is a management tool for installing Unity versions, managing projects, and handling licenses efficiently.