unity Roadshow

About Me

Viking Quest VR

Get The Assets:

bit.ly/UnityRSNYC

Dan Miller – danielmi@Unity3d.com

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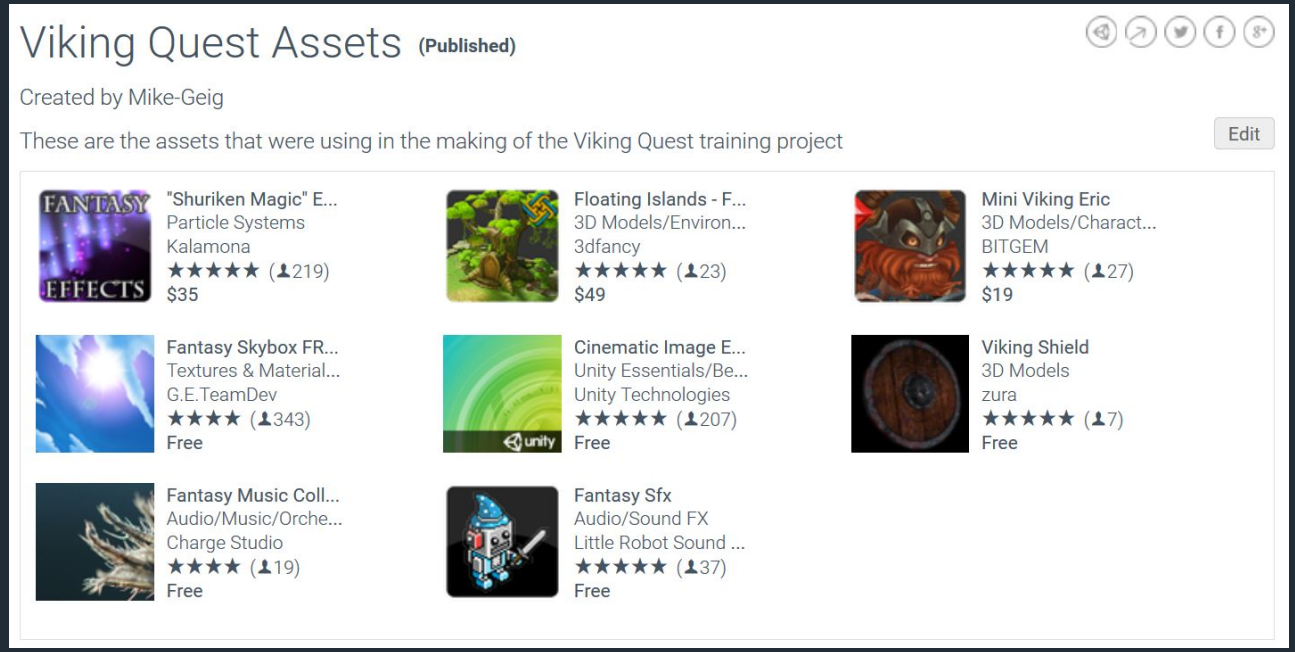
The Assets



http://bit.ly/2gFgIUZ

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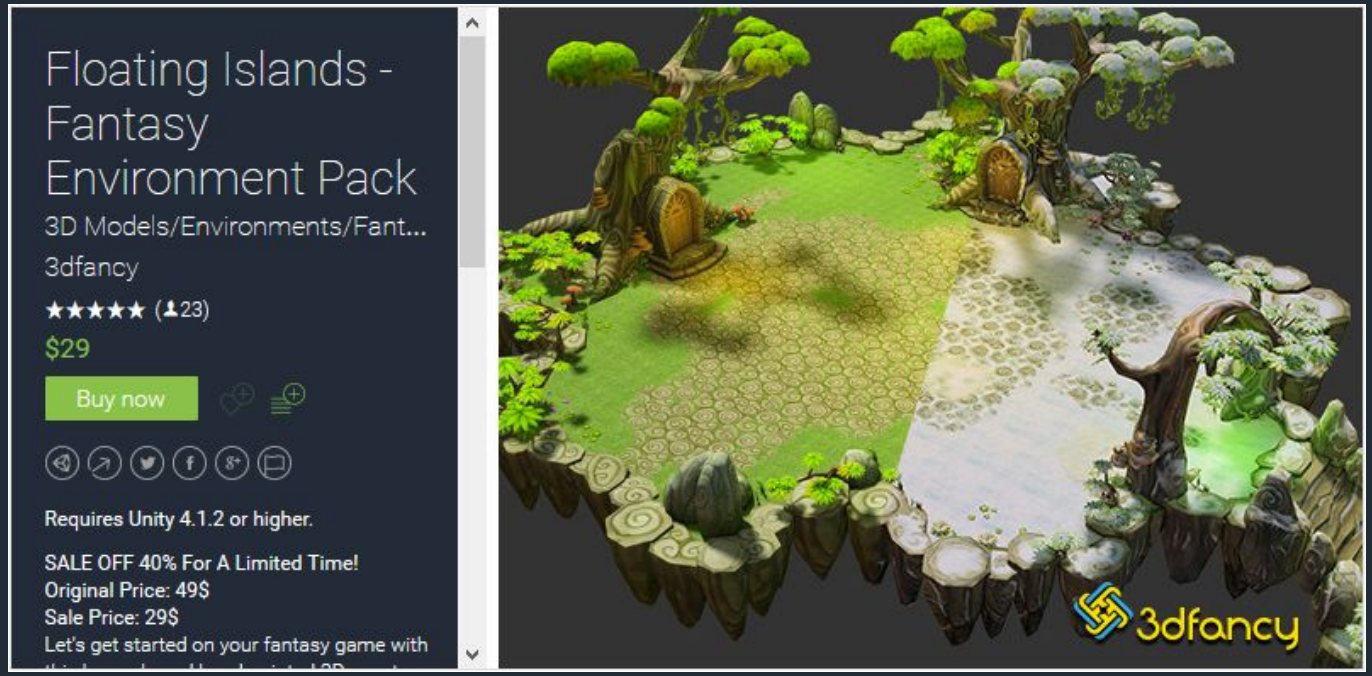
Environment – 3DFancy



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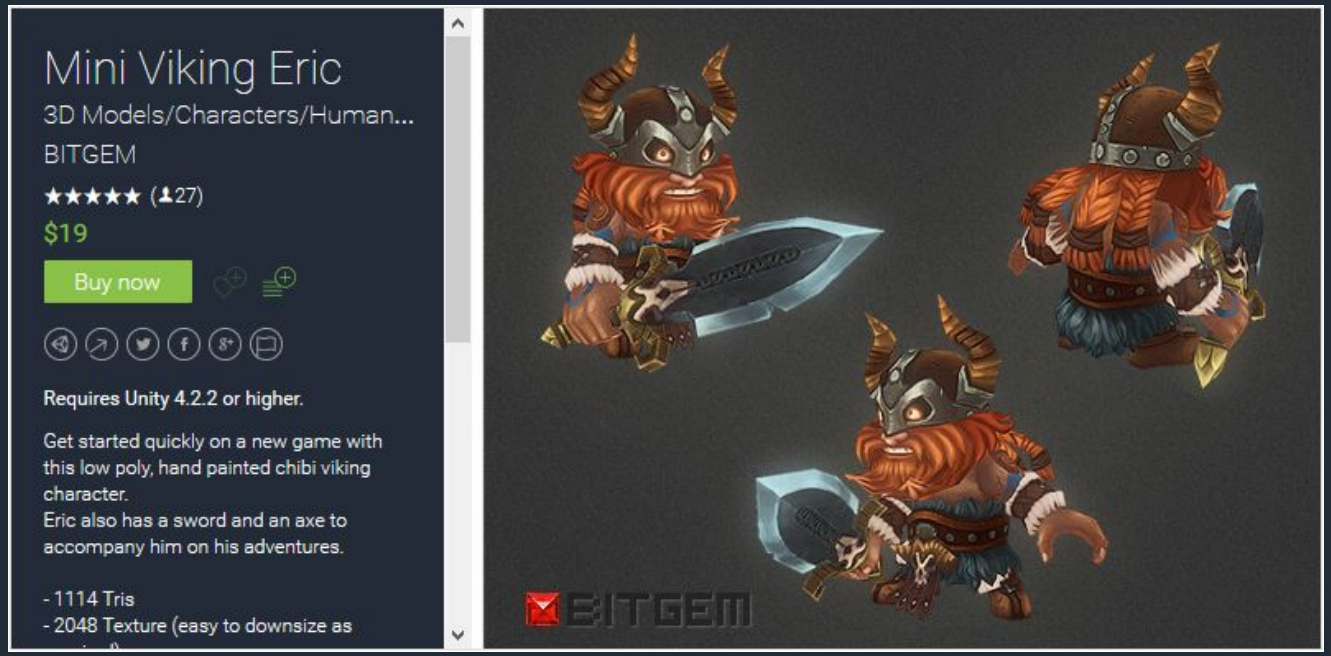
Character - BITGEM



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The Game

Objectives

- CREATE a game using content from the Asset Store
- CONSTRUCT a game with integrated VR
- DEMONSTRATE how to use the various tools of the Unity Editor
- IDENTIFY good design practices when building for VR

Cycles

1. The Project
2. Building a Scene
3. The Viking
4. World Boundaries
5. Integrating VR
6. Animating a Character
7. Animation Transitions
8. Collectables
9. Spawning Collectables
10. The Game Manager
11. Audio
12. Improving Graphics
13. Build and Deploy

Step 01: The Project

1. Open Project
2. Drag a **Ground** model into the scene from Prefabs/Environment
3. Save scene into **Scenes** folder
4. Practice navigating the scene
    1. RMB + Drag = Look Around
    2. RMB + WASD = Move Around
    3. RMB + QE = Move Up / Move Down
    4. F = Focus on Select Object

Step 02: Building a Scene

1. Practice placing objects around the scene
2. Practice using the scene tools:
    1. Q – Hand tool – used for panning
    2. W – Translate tool – used to move objects
    3. E – Rotate tool – used to rotate objects
    4. R – Scale tool – used to scale objects
    5. T – Rect tool – used to move 2D objects like UI

Step 03: The Viking

1. Open the scene **StartingScene**
2. Drag the **Viking** model into the scene
3. Add a **Capsule Collider** to the **Viking - Center.y = 1 Height = 2**
4. Add a **Rigidbody** to the **Viking**
5. Drag the **Player_FullControl** script onto the **Viking**

Step 04: World Boundaries

1. Freeze the X, Y, and Z **Rotation Constraints** of the **Rigidbody** component on the **Viking**
2. Drag the **WorldColliders** prefab into the **Hierarchy** window
3. Click the **Layers** button in the upper-right of the editor and click the **Eye** icon next to the **WallColliders** layer
4. On the **Camera**, uncheck the **WallColliders** layer on the camera's **Culling Mask**
5. Test the game in **Play** mode

Step 05: Integrating VR

1. Create an **Empty** game object, name it **Camera Control Rig**
2. Set **Camera Control Rig's** position to **X** = -2.38, **Y** = 7, **Z** = -18
3. Drag the **Main Camera** onto **Camera Control Rig** in the **Hierarchy** window
4. Remove any rotation from the **Main Camera**
5. Add the **Camera Editor Control** script to the **Main Camera** and check **Mouse Control** if not testing with a **VR Headset**
6. Go to **VR->Enable VR** if testing with a **VR Headset**

Step 06: Animating a Character

1. Add **CameraFollow** script to the **Camera Control Rig** and set the **Viking** as the **Target** and set **Speed** to **1**
2. Drag the **Idle, Run,** and **Jump** animations onto the **Viking**
3. Open the **Animator** window to see the animations on the **Viking**

Step 07: Animation Transitions – Part 1

1. In the **Animator**, create a **Float** parameter named **Speed**
2. Create the transitions between **Idle** <-> **Run**
3. On each transition uncheck **Has Exit Time**
4. Set the transition from **Idle** to **Run** as “**Speed Greater .01**”
5. Set the transition from **Run** to **Idle** as “**Speed Less .01**”

Step 07: Animation Transitions – Part 2

1. In the **Animator** create a **Trigger** named **Jump**, and a **Bool** named **Grounded**
2. Create the transitions between **Idle** <-> **Jump**
3. On each transition uncheck **Has Exit Time**
4. Set the transition from **Idle** to **Jump** as “Jump”
5. Set the transition from **Jump** to **Idle** as “**Speed Less .01**” AND “**Grounded = true**”
6. Set the **What Is Ground** property to **Ground** on the **Viking’s** player script

Step 07: Animation Transitions – Part 3

1. Create the transitions between **Run** <-> **Jump**
2. On each transition uncheck **Has Exit Time**
3. Set the transition from **Run** to **Jump** as “Jump”
4. Set the transition from **Jump** to **Run** as “**Speed Greater .01**” AND “**Grounded = true**”
5. Adjust the blends on the transitions as needed

Step 08: Collectables

1. Turn the **Viking** into a prefab by dragging it from the **Hierarchy** window into the **Prefabs** folder
2. Drag **Collectable** prefab into scene
3. Add **Collectable** script to the **Collectable** and click **Apply** in the top right of the **Inspector**
4. Tag the **Viking** as **Player**

Step 09: Spawning Collectables

1. Delete **Collectable** object from scene
2. Add the **CollectableSpawner** script to the **Spawn Points** game object
3. Add the **Collectable** prefab to the **Collectable Prefab** property on the **CollectableSpawner** script

Step 10: The Game Manager

1. Drag the **Game Manager UI** prefab into the scene
2. Drag the **Wall** game object onto the **Wall** property of the **Game Manager** script
3. Drag the **Collect Panel** from the **Game Manager** onto the **Viking**
4. Drag the **Timer Panel** from the **Game Manager** onto the **Environment**
5. Drag the **Win and Loss Panels** from the **Game Manager** onto the **Camera Control Rig**

Step 11: Audio

1. Add an **Audio Source** component to the **Main Camera** and **Wall** game objects
2. On the **Camera** check **Loop** and set the **Clip** to **Forrest Spirit**
3. On the **Wall** uncheck **Play on Awake** and set the **Clip** to **Spell_02**
4. Add an **Audio Source** component to the **Collectable** prefab
5. On the **Collectable** uncheck **Play on Awake** and set the **Clip** to **Inventory_Open_01**

Step 12: Improving Graphics

1. Drag **Sunny 03B noSun** skybox into scene
2. Open the **Lighting** window, uncheck **Auto**, and then click **Bake**
3. Add Post Processing Behavior to the **Main Camera** (personal preference)
4. Create Post Processing Profile in Project Hierarchy
    1. Tonemapping
    2. Bloom
5. Assign Post Processing Profile to Behavior

Step 13: Build and Deploy

1. Go to **File->Build Settings**
2. Click **Add Open Scenes** to add current scene to the build
3. Click **Build and Run**
4. Save the game file and enjoy!

Optional Steps

Camera Scaling

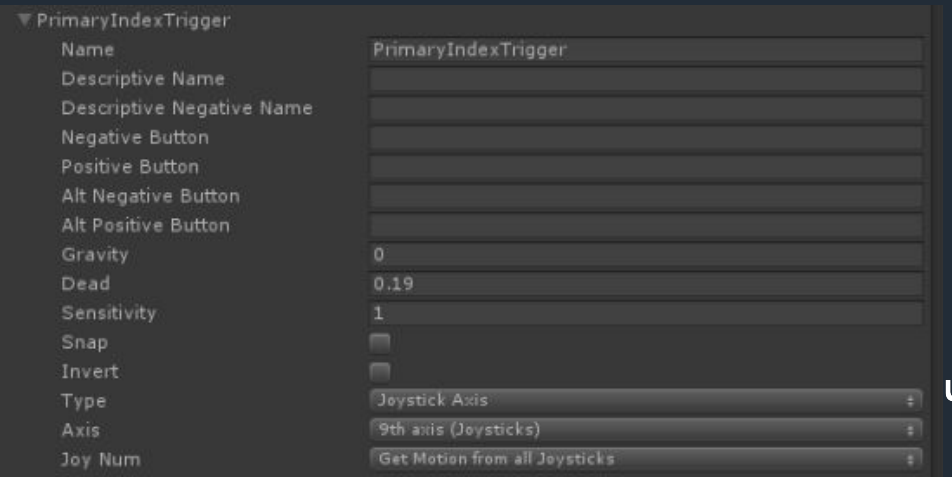
1. Drag **World Shrinker 3000** prefab into scene
2. Drag the **Camera Control Rig** onto the **Cam Controller** property of the **Camera Scaler** script
3. Open the **CameraZoomTesting** scene to see the difference between zooming a VR camera and scaling it

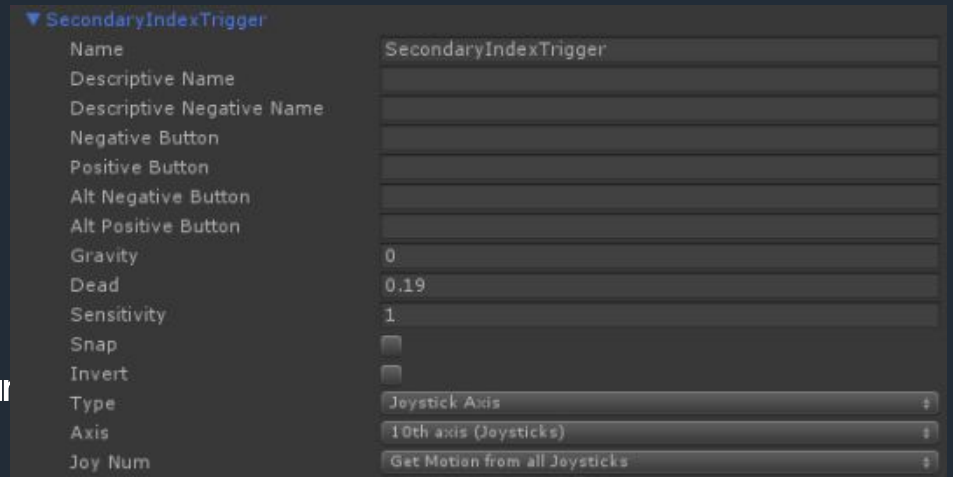
Motion Controls

1. Create Empty GameObject
    a. Rename it to Controller
    b. Add MotionController component
    c. Configure VR Node
2. Create a cube
    a. Remove Collider
    b. Scale to (0.1, 0.1, 0.1)
    c. Make child of Controller
3. Duplicate Controller
    a. Reconfigure VR Node

Motion Controllers Input

1. Open Input Manager
   a. Add PrimaryIndexTrigger and configure
   b. Add SecondaryIndexTrigger and configure





Vacuum Setup

1. Add ControllerVacuum to Right Controller
2. Add Empty GameObject to Right Controller as child
    a. Position at (0, 0, 2)
3. Assing Empty GameObject as LerpPoint

Scene Setup

1. Disable Camera Follow
2. Lower Level Boundaries to (0, -2, 0)
3. Create Dangle Animation On Viking
4. Add Animation Triggers - Dangle, Idle
5. Add Dangle State and setup transition from any state
6. Create transition from any state to Idle state

Thank you
bit.ly/rsnyc717