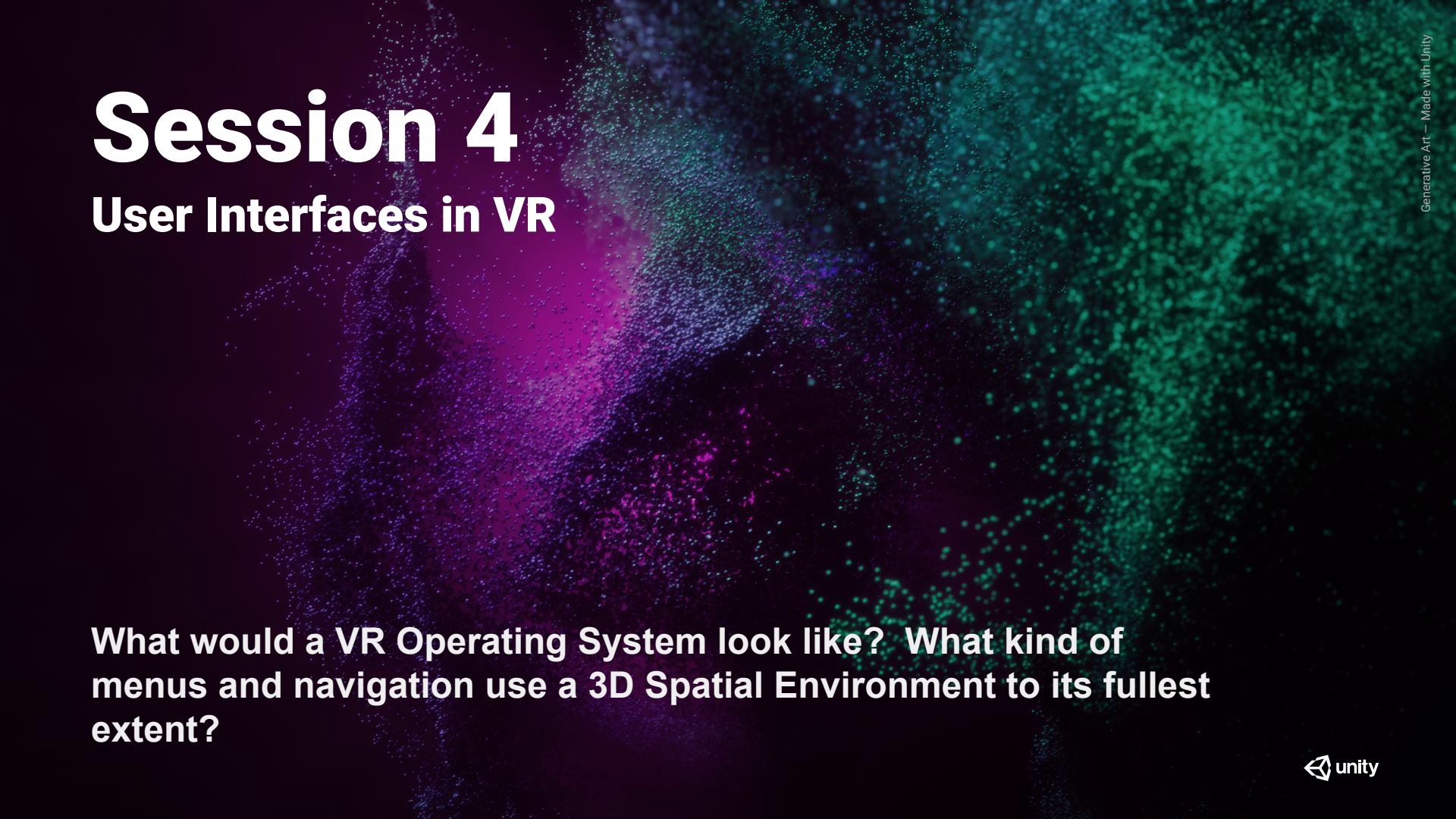
Session 4

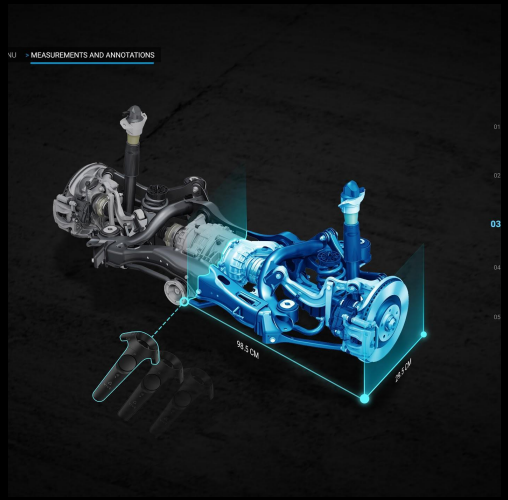
User Interfaces in VR



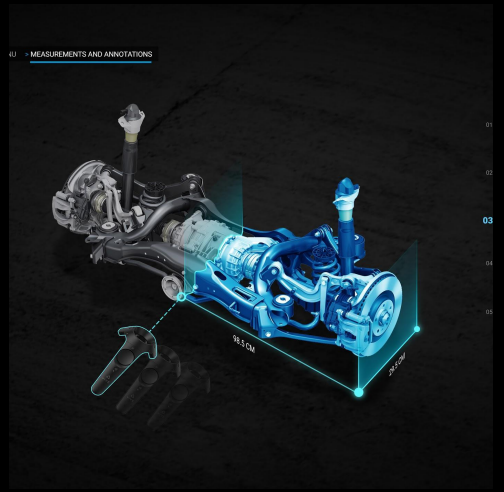
What would a VR Operating System look like? What kind of menus and navigation use a 3D Spatial Environment to its fullest extent?

unity

Instructor(s)



Instructor Name
Instructor Title
Instructor Company



TA Name
TA Title
TA Company

Session Goals

In this session, you'll:

- Experiment with the constraints and best practices for creating User Interfaces in VR
- Create World Space User interfaces and TextMeshPro to display information about objects in the world
- Use UI Input components to manipulate objects in the scene

Session 4 - Outline

1. Common Uses of User Interfaces in VR
    - Create a World-Space User Interface in your Project

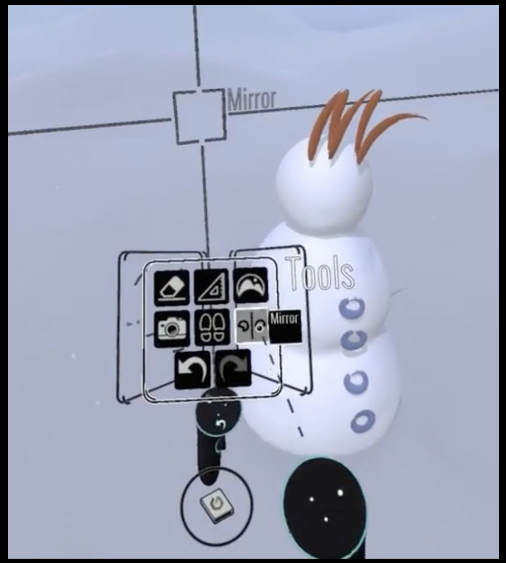
1. Creating Clean and Legible Interfaces in VR
    - Use TextMeshPro and UI panels to create a legible interface

1. Creating Interactive User Interfaces
    - Add interactive buttons and to Capstone Project

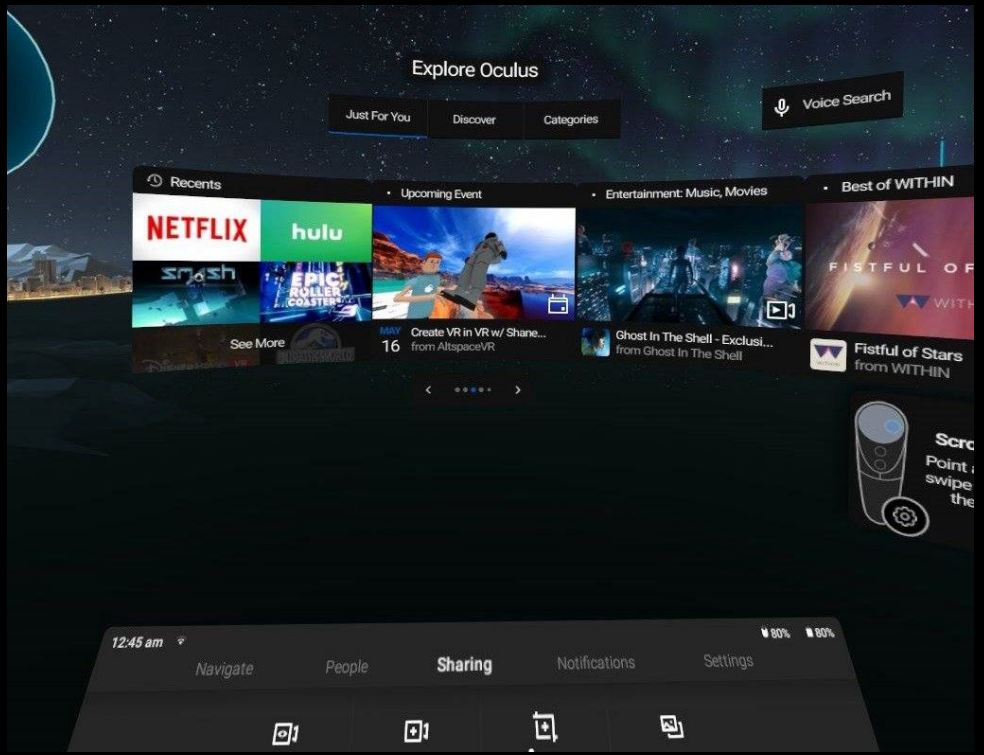
1. Advanced UI Input and Layout
    - Create an input mechanism that swaps the material of an object in the scene

Activity 4: Context-specific User Interfaces

User Interfaces in VR



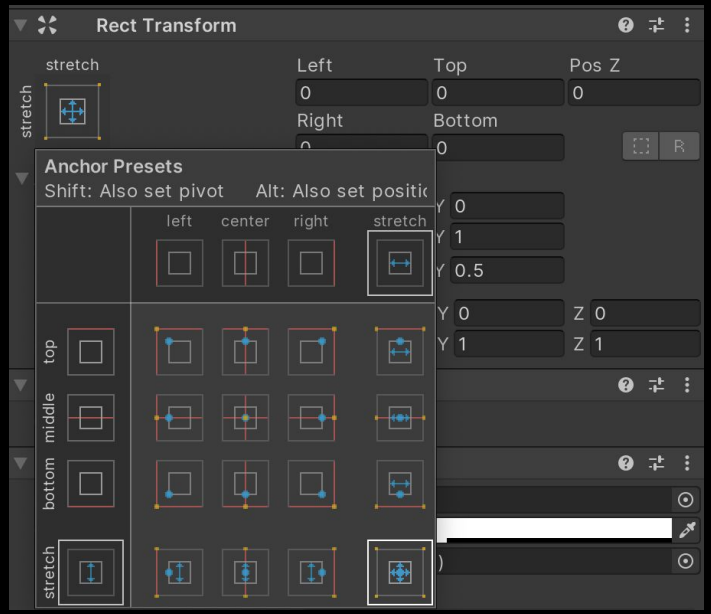
On-controller interface in Tilt Brush



Curved, world-space interface - the Oculus home menu

unity

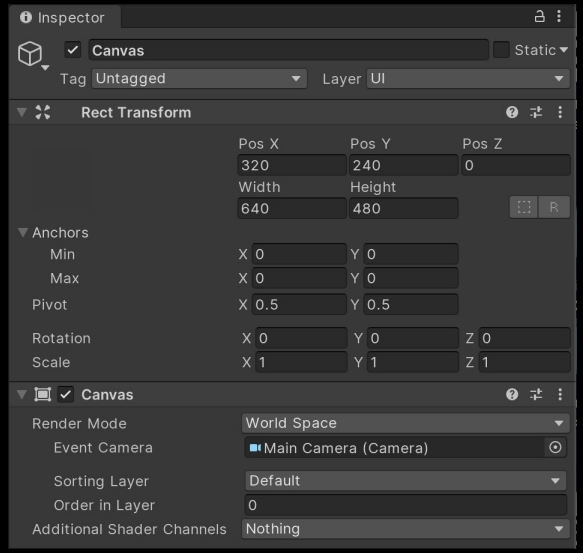
Unity UI Canvas



unity

Create a World-space Interface

1. Create a Canvas element and set it to World Space Mode
   - Make sure it is scaled to a proper size and fits within the scene
2. Create a Panel
3. Add a TextMeshPro object and customize the text further



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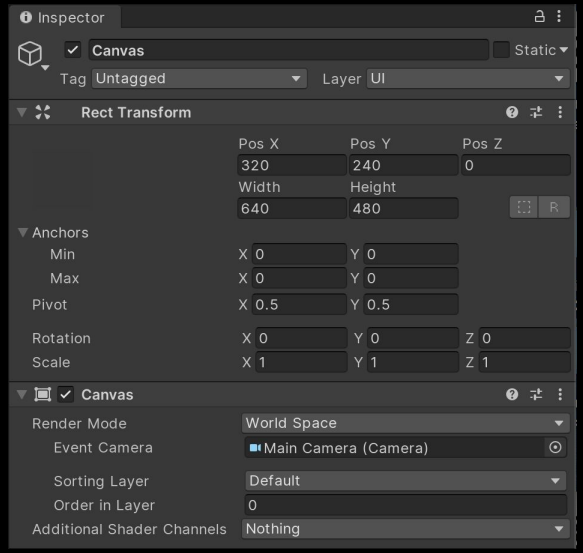
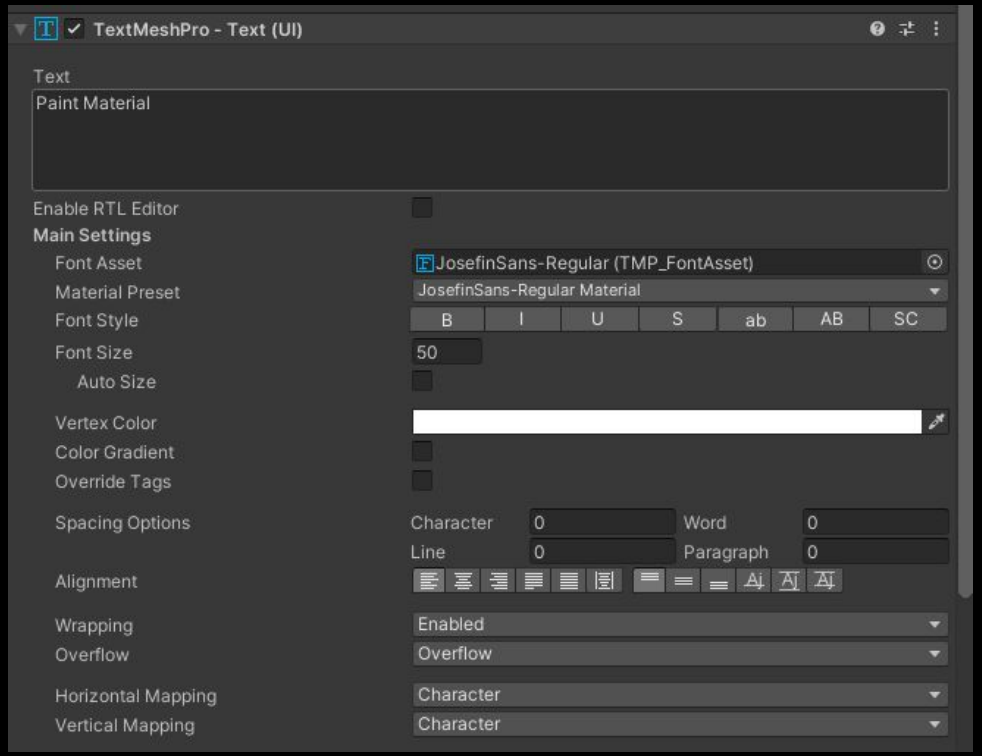
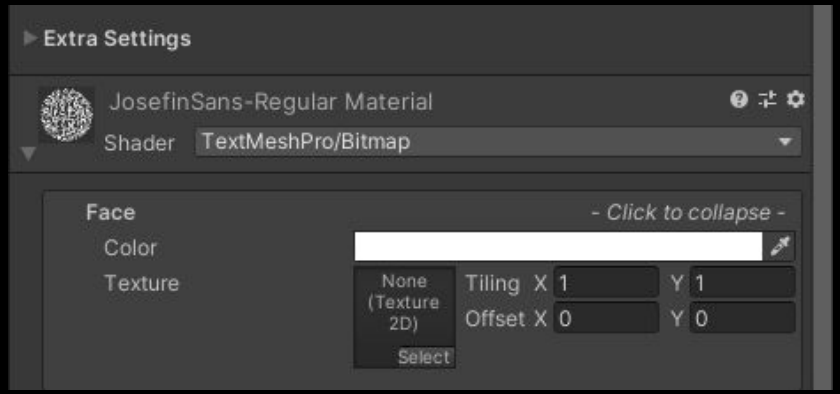


unity

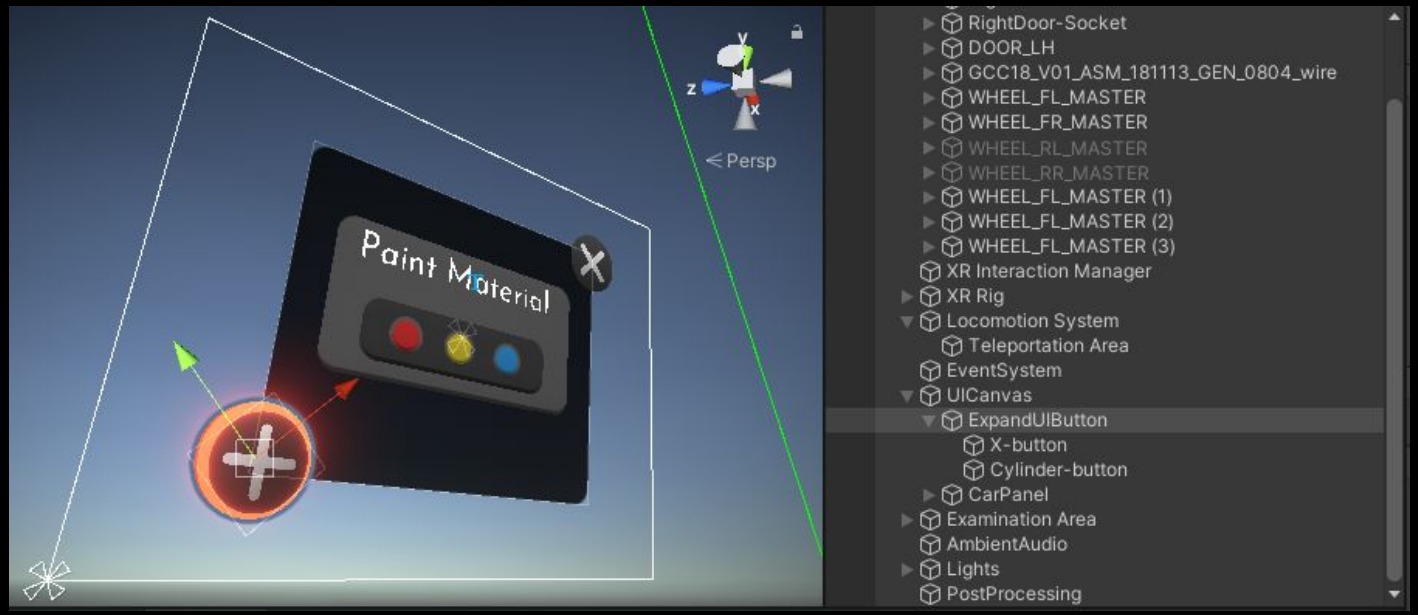
TextMeshPro Settings





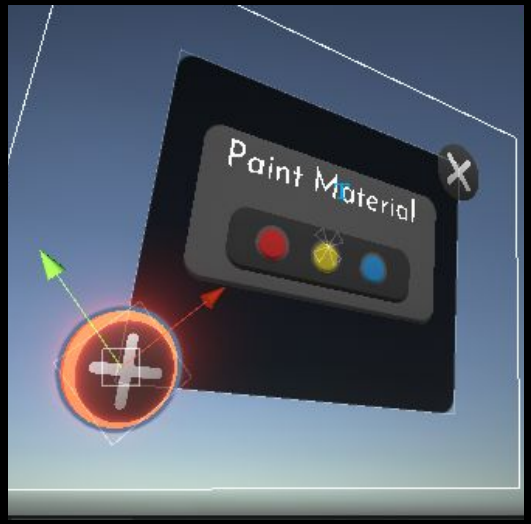
unity

UI Panels and Backgrounds



Creating Legible Interfaces in VR

1. Create more legible text by:
   - Configuring TextMeshPro settings
   - Creating a panel or 3D geometry as a background



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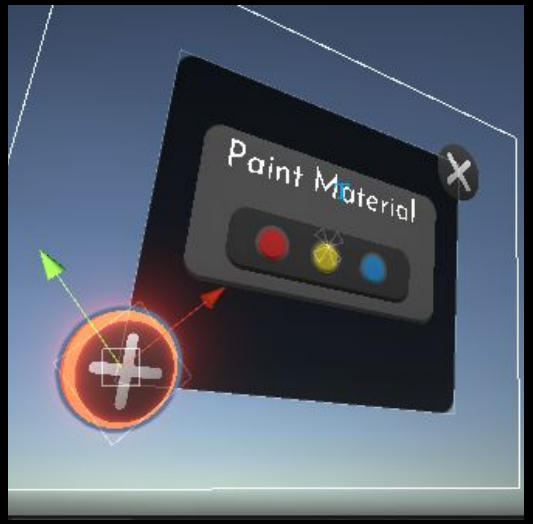
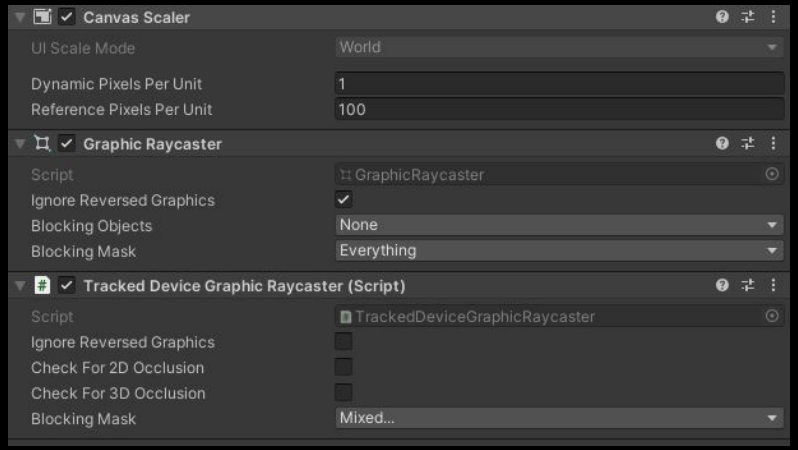


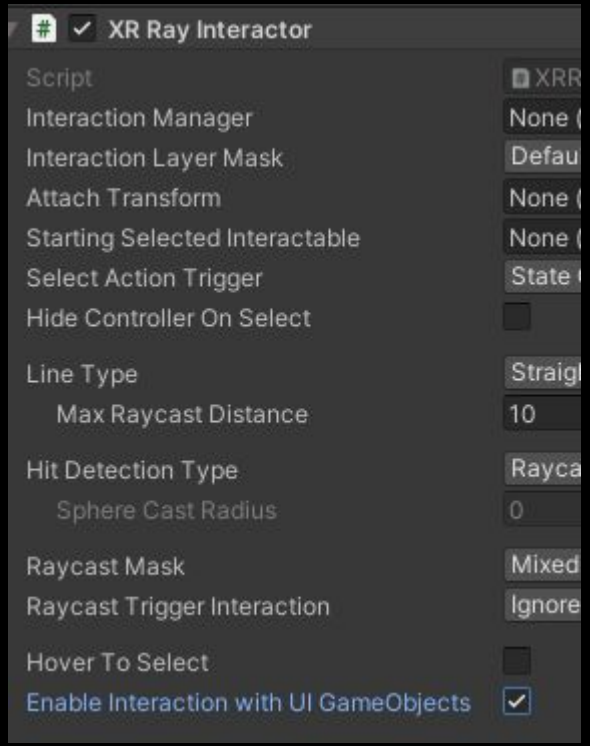
Goals for UI in Capstone Project

- Provide text or audio information about objects

- Menu for changing configuration of objects
  - Material Swapping buttons
  - Play simple animations
  - Configure environment lighting or settings

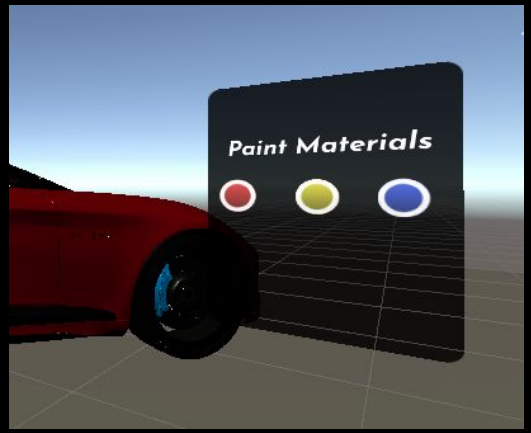
Tracked Device Graphic Raycaster





Creating Interactive Interfaces

1. Create a UI Button that sets the material of a nearby object
   - Create material swapping functionality using the Material Swapper script
   - Configure hover and select properties of the button



Bonus: Improve the user experience of your button by clearly indicating its state (active, hovered, clicked, etc)

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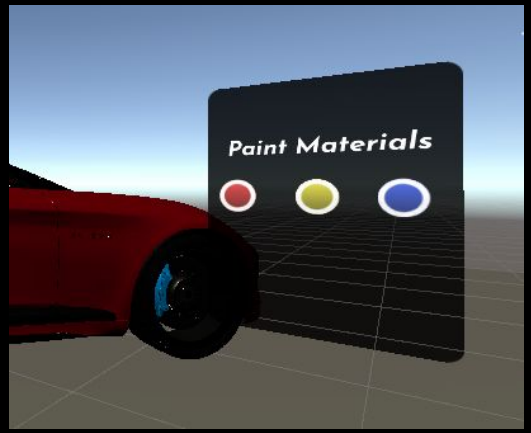

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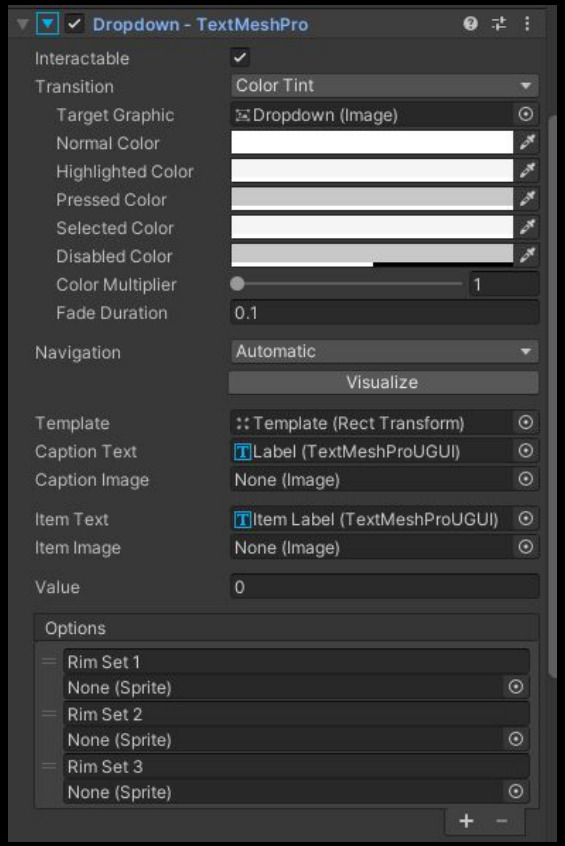
Other UI Input

- UI Toggle Groups
- Sliders
- Dropdowns



Creating Interactive Interfaces

1. Create a Toggle Group or Dropdown that changes an aspect an object in your scene

Creating Interactive Interfaces

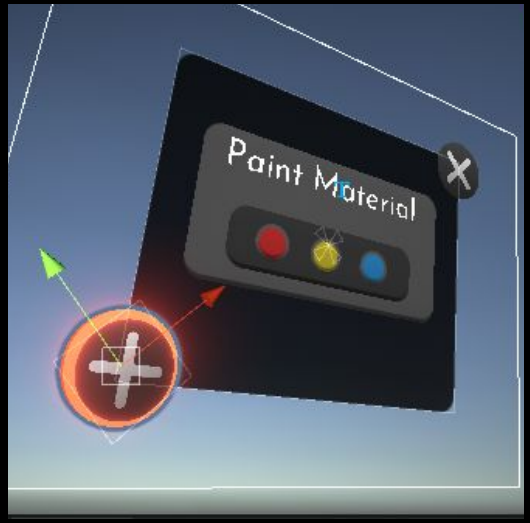
1. Create a Toggle Group or Dropdown that changes an aspect an object in your scene

Activity Session 4

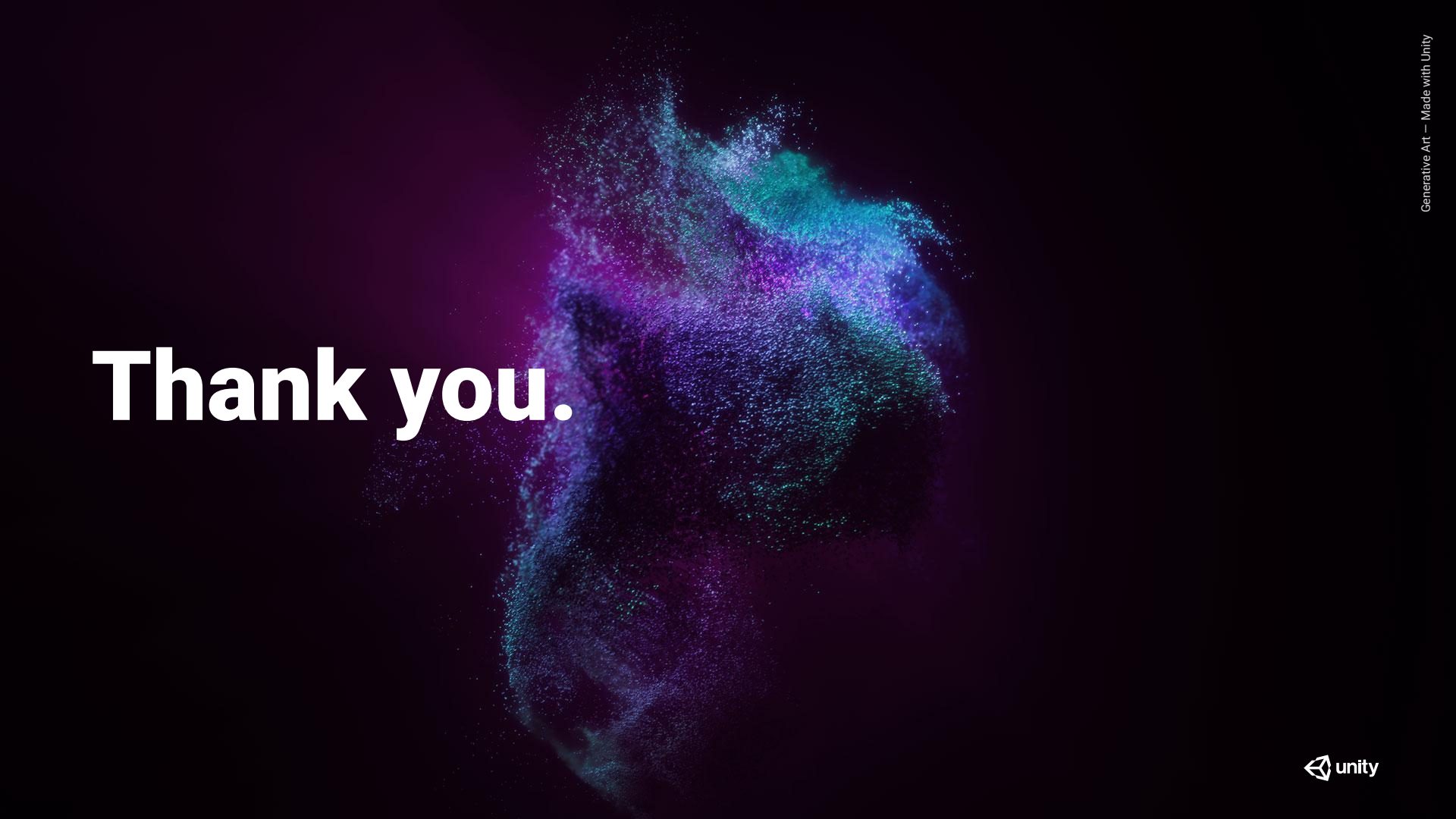
Context-specific Interfaces

Activity 4 Goals

1. Sign up for Session 5 Office Hours
2. Add Plans for your User Interfaces to your Design Brief
3. Create a few collapsible interfaces for different objects in your scene
4. Create buttons and toggles that change configuration of objects and scene environment



Feel free to ask questions!


Thank you.
Generative Art — Made with Unity
unity