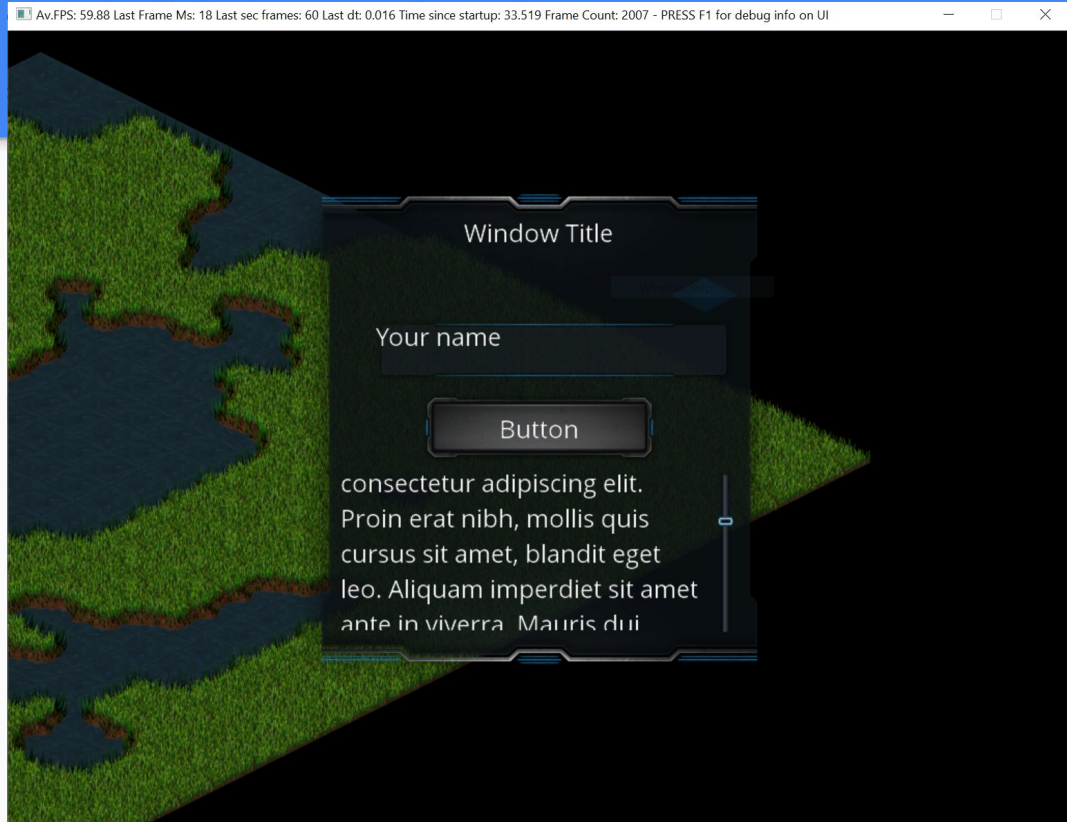


# Game Development

UI Scroll Bar

# Work in groups

- Identify the new functionality
- Decide what needs to be changed in the UML



# New functionality

1. New UI: Scroll Bar
2. Define **drag area** and **drag position**: if mouse is down
3. Define UI scrolling element and scroll factor -> UI members
4. Link UI text area to Scroll Bar -> Determines draw position

# New functionality

## 1. Scroll Bar

- New UI element with an image for slider

## 2. Define **drag area** and **drag position**: if mouse is down

- Add new variables (drag\_factor, drag\_area) and get/set drag position

## 3. Define UI scrolling element and scroll factor -> UI members

- Add scrolling UI reference and **scroll\_factor** variable

## 4. Link UI Input Text to Scroll Bar

- Any UI element could be linked to UI scroll -> LinkScroll()

# TODO 1

*“Create a new UI Image for scroll bar and new UI Image for scroll thumb”*

- Scroll bar is not interactive, neither draggable
- Scroll thumb is interactive and draggable, set drag area
- Try having this on the screen before moving forward

# TODO 2

*“Create a new Empty UI element to define text\_box limits for text\_area”*

- Text area is a new UI Label element
- Text area is child of our new empty Text Box element
- Text box defines drawing limits for child elements
- Text area draw position depends on Scroll thumb element

# TODO 3

*“Link Text area to Scroll thumb draggable element”*

- New UI method: LinkScroll()
- Keep reference to UI scroll element and x,y scroll factor
- Support inverted scroll mode

# TODO 4

*“Input checking should apply scrolling limits”*

- Consider drag area and drag position
- Get/Set drag position accordingly



# Homework

- Use Scroll Bar as Audio volume slider