Job Hunter

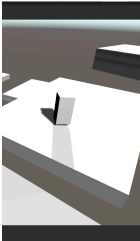**A Game About Getting a Job**
Seb Kryspin

1

Getting a job can be fun(ny)!

- *Job Hunter* will address fears of finding a job after graduation.
  - ○ Wacky Characters
  - ○ Sense of Humor
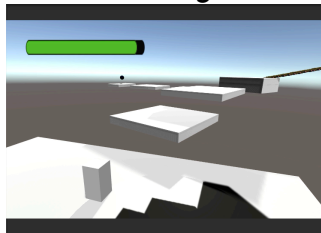
- Laughter reduces anxiety, promotes learning [5]

2

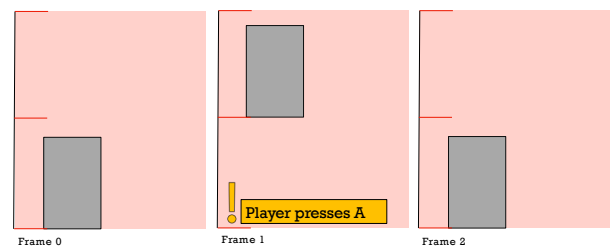**Movement**

Jumping
Walking

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Implementing a Jump

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Jumping: A Naïve Approach

If player presses A
    Raise Character by 1 Units

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Jumping: A Naïve Approach

Player presses A

Frame 0   Frame 1   Frame 2

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Jumping: A Naïve Approach

Frame 0   Frame 1   Frame 2
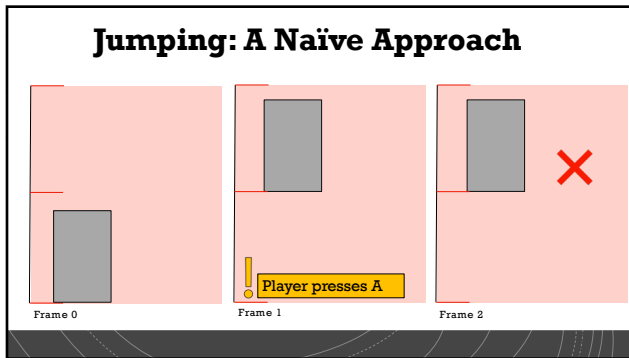
Player presses A ❌

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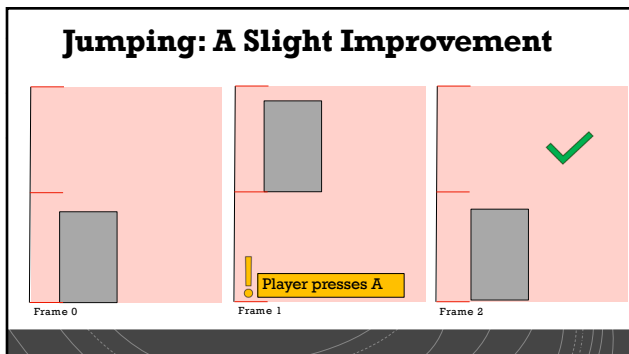
Jumping: A Slight Improvement

If player presses A
    Raise Character by 1 Unit

Else
    Put Character back on the Ground

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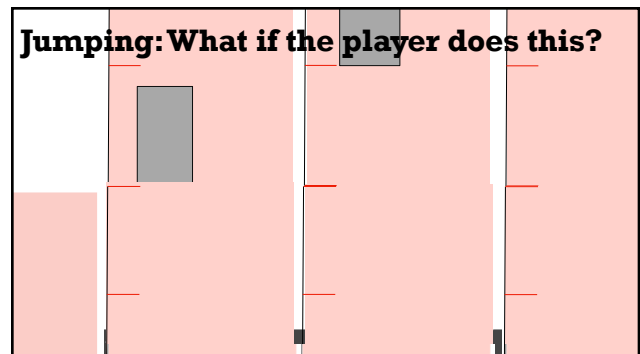## Jumping: A Slight Improvement

Frame 0   Frame 1   Frame 2

Player presses A ✅

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Jumping: What if the player does this?
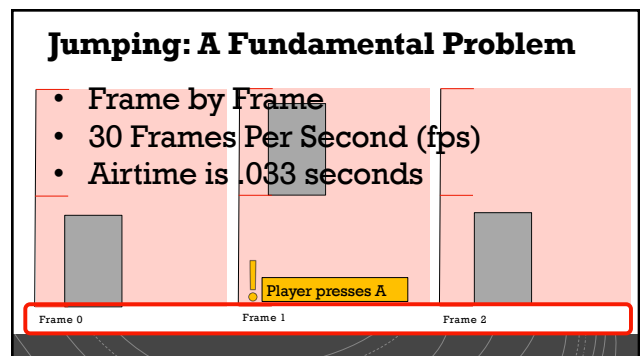
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Jumping: An Improvement

If player presses A and is On Ground
    Raise Character by 1 Unit   ✅

Else
    Put Character back on the Ground

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Jumping: A Fundamental Problem

- Frame by Frame
- 30 Frames Per Second (fps)
- Airtime is .033 seconds

Frame 0   Frame 1   Frame 2

Player presses A

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Jumping: A Rethinking

- Apply jump movement as a Velocity
- Reducing velocity each frame by applying gravity

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Jumping: An Improvement

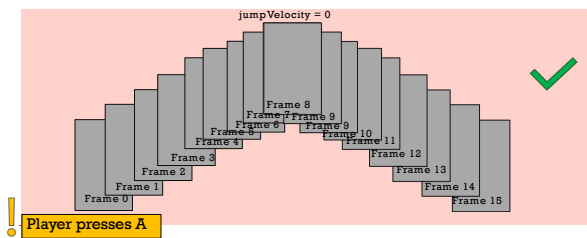If player presses A and is On Ground
jumpVelocity is JUMP_SPEED

Else
jumpVelocity -= gravityVelocity

where gravityVelocity = GRAVITY * time.DeltaTime

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Jumping: An Improvement

jumpVelocity = 0

Frame 8
Frame 7 Frame 9
Frame 6 Frame 9
Frame 5 Frame 10
Frame 4 Frame 11
Frame 3 Frame 12
Frame 2 Frame 13
Frame 1 Frame 14
Frame 0 Frame 15

Player presses A
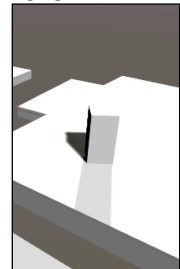
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Jumping: More Control

- Will always jump the same height

- What if we want the player to be able to jump different heights?

- Idea: Let players exit the jump early

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Jumping: More Control

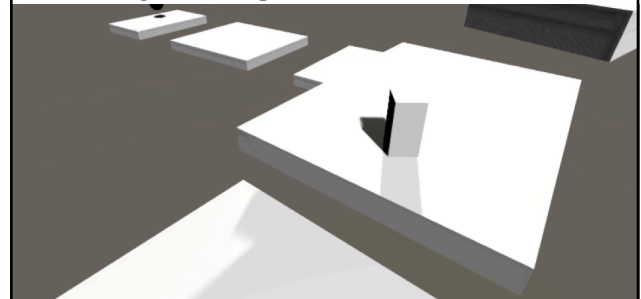If player presses A and is On Ground
jumpVelocity is JUMP_SPEED
Else if player releases A
jumpVelocity = 0
Else
jumpVelocity -= gravityVelocity

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Jumping: A New Issue

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Jumping: A New Issue

If player presses A and is On Ground
    jumpVelocity is JUMP_SPEED
Else if player releases A and jumpVelocity > 0
    jumpVelocity = 0
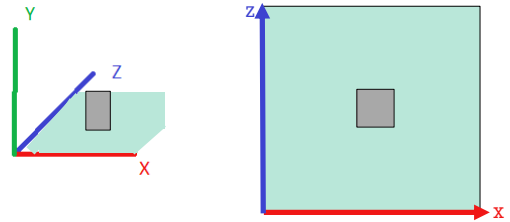Else
    jumpVelocity -= gravityVelocity

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Jumping

✓ Smooth jumping
✓ Player controls height of jump
✓ Player can only begin jump on ground
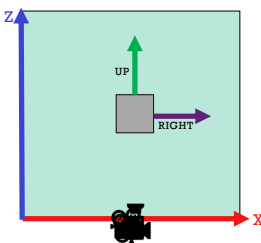
20
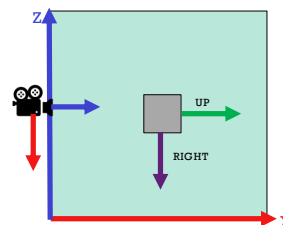
Implementing Movement

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Unity 3D Space

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Direction of Movement

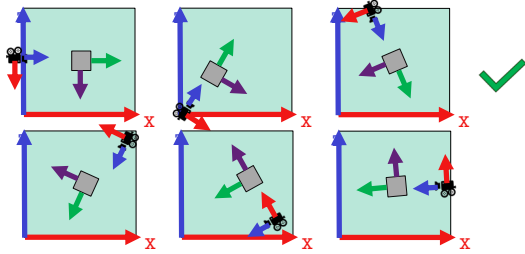- Let UP = Z axis
- Let RIGHT = X axis

- Confusing for player

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Direction of Movement
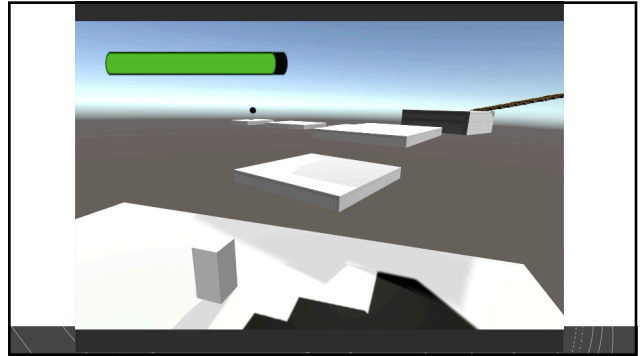

- Let UP = Forward vector of camera

- Let RIGHT = Right vector of camera

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Examples: Direction of Movement

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Other Stuff I did

- Designed & Programmed Level 1
- Player Health & Death
- Two enemies & animations
- Picking up and Placing Items
- Collectables
- Basic Physics

⭐**Thank You**⭐

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