Class Today

- How to setup a countdown timer.

Similar to Score
Need a number and 3D-Text

- Create a number variable, \textit{timerNumber}
- Create a 3D text to display the value of the number, \textit{timer} - has a string value
- Create a procedure to initialize both
- Create a procedure to update the timer
  – Timer counts down!

Proc – \texttt{InitializeTimer}, \texttt{updateTimer}
Properties

- May also want to add a Boolean variable to turn on when playing game and turn off when game is over

Create a Timer Event Listener

- Create the event

Resulting Event

- Note the time chosen means this event will repeat in that amount of time
  - In this case the event repeats every 1.0 sec

What question do you want to ask each time in the event?

Stops at 0.0!
Decimal numbers are not stored exactly in a computer

- \( \frac{1}{3} = .3333333333333333333 \)
- .25 might be .250000000145

- So NEVER compare if a decimal number is equal to a number, such as:
  - timerNumber == 0.0
- INSTEAD ask if timerNumber >= 0.00001

Whole Numbers are stored exactly in the computer

- Ok to compare if a whole number is equal to 5 or 0…

This lecture covered

- Setting up a timer to count down
- Event – TimeListener
  - Given a time increment, the event happens over and over in that time increment
- Decimal numbers are not stored exactly in the computer, so should never check if they are equal to a decimal number but instead check if > or < to values.