Custom Java3D
Animation Framework

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Framework Classes and Interfaces

- **Classes**
  - **AnimatedScene**
    - A version of basic scene that supports **key frame** animation
  - **AnimationInterpolator**
    - A behaviour that is woken up each time a frame is rendered
  - **Constants**
    - A class containing static constants like **X_AXIS**, **Y_AXIS** and **INFINITE_BOUNDS**
- **Interfaces**
  - **UpdateListener**
    - An interface that can be associated with an **AnimationInterpolator**
    - Can time a frame is rendered the **updateSceneGraph()** method of the **UpdateListener** is called

Getting Started

- Create a new Class that extends **AnimatedScene** and implements **UpdateListener**

```
public class Example extends AnimatedScene implements UpdateListener {

    public static void main(String args[]) {
        new Example();
    }

    public Example() {
        enableAnimationBehavior(this);
        createContentBranch();
    }

    public void createContentBranch() {
        // Create initial scene here
    }

    public void updateSceneGraph() {
        // Update scene as needed for every frame
    }
}
```

Getting Started

- Update the **updateSceneGraph()** method so that it calculates the *animation time* i.e. the amount of time in milliseconds since the animation started

```
long animationStartTimeMillis = -1;
public void updateSceneGraph() {
    long currentFrameTimeMillis = System.currentTimeMillis();
    if(animationStartTimeMillis == -1)
        animationStartTimeMillis = currentFrameTimeMillis;
    long animationTimeMillis =
        currentFrameTimeMillis - animationStartTimeMillis;

    updateSceneGraph(animationTimeMillis);
}
```