# Flubber

### Attributes

- vertex\_list : array<Vertex>
- edge\_list : array<Edge>
- edge\_matrix : array<array<Edge>>
- last\_time : floatElasticity : floatCompression : float
- Stable Distance : float

## Operations

- + update( time : float ) : void
- + draw( ): void
- computeEdges(): voidcomputeForces(): voidmoveVertices(): void
- computeShape( ) : void

## Vector

#### Attributes

x : floaty : float

#### Operations

- + toPolar( ) : float,float
- + norm(): float
- + addToSelf( b : Vector ) : void
- + +( b : Vector ) : Vector
- + subToSelf( b : Vector ) : void
- + -( b : Vector ) : Vector
- + multToSelf( lambda : float ) : void
- + \*( lambda : float ) : Vector
- + -( ): Vector
- + negateSelf( ): void

# Segment

#### Attributes

- source\_index : int
- target\_index : int
- target\_vertex : Vertex
- norm : float
- theta : float
- force : Vector

### Operations

+ computeForce( ) : void

# **Edge**

#### Attributes

- a\_segment : Segment
- b\_segment : Segment
- a\_vertex : Vertex
- b\_vertex : Vertex

## Operations

+ updateSegments(): void

# **Vertex**

### Attributes

- position : Vector
- segment\_list : array<Segment>
- force : Vector
- speed : Vector

## Operations

- + sortSegments( ) : void
- + move( dt : float ) : void
- + computeForce( ) : void

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