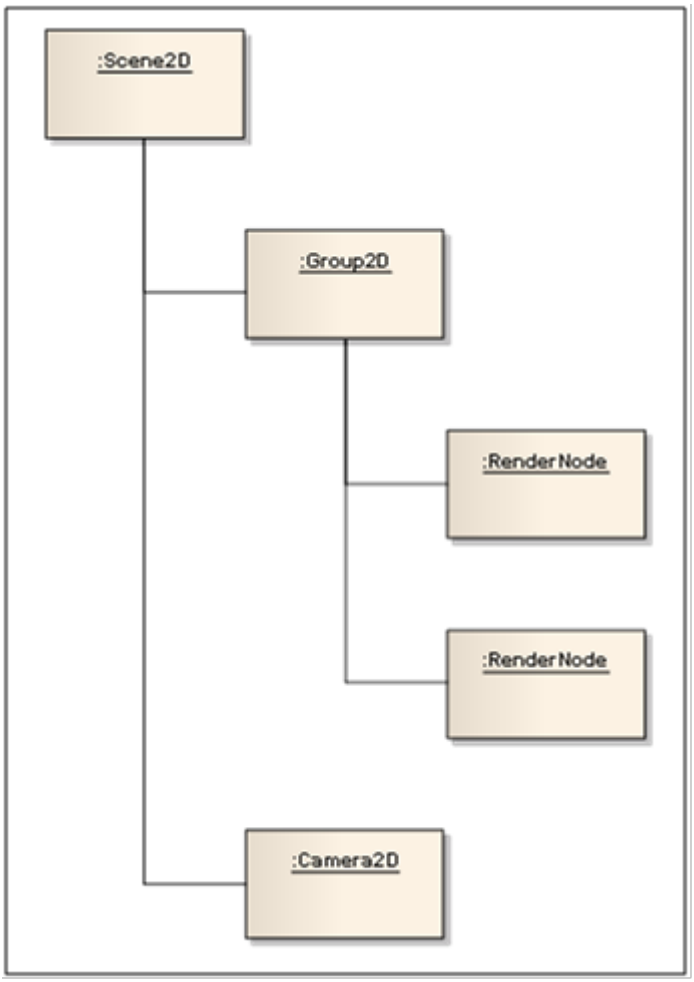
2D Scenes and Nodes

Scene Graph

The 2D scene graph is a tree structure which organizes nodes of type Candera::Node2D. The root of each scene graph has to be a node of type Candera::Scene2D. All nodes of type Candera::Node2D can hold sub nodes added by Candera::Node2D::AddChild().

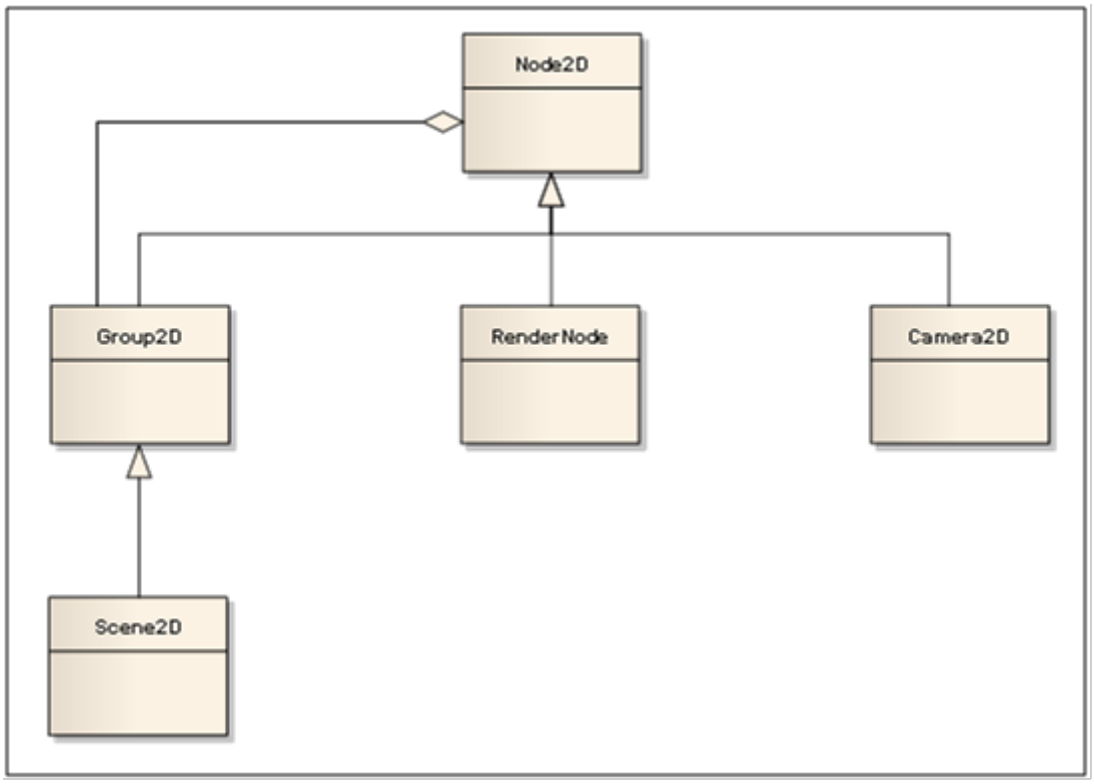
Nodes of type Candera::RenderNode are representing content which has to be rendered to the target, e.g. text or a bitmap. At least one node of type Candera::Camera2D which is the link to the render target (e.g. a display) has to be part of the scene graph.



RenderNode

Only nodes of type RenderNode are considered during rendering. Each render node requires a list of effects (effect chain) which implements the visual representation of that node. Each render node

has a depth value as parameter which defines the order of rendering (z-order). Higher value means background, lower value means foreground.



Transformations

The functionality to define the local coordinate system is derived from Candera::Transformable2D and consists of following components:

- position,
- rotation,
- scale,
- and the pivot offset.

This information is always relative to its parent node. Changing one of these parameters affects the presentation of all child nodes. If for example a node is rotated, all child nodes are rotated accordingly. Each nodes rotation, translation (position) and scale values are combined in one transformation matrix which is multiplied with the parent nodes transformation matrix.

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