

X - TD

SOEN 6441 - Build 1

Team 10

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Mohammad Ali, Meng Yao Wang, Zhe Zhao

Agenda

Architecture

Demonstration

Team 10

Architecture

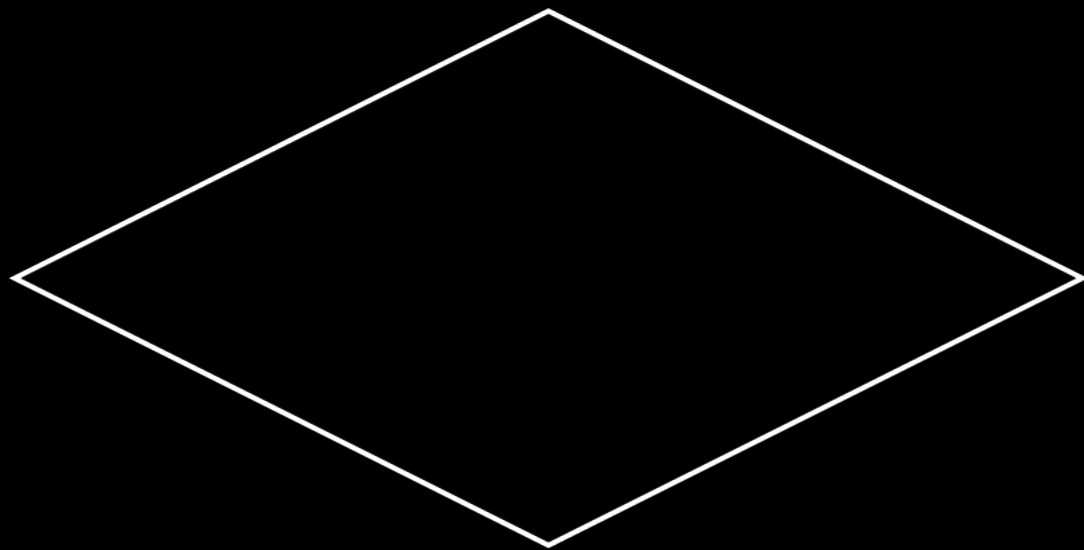
Model Layer

Core Classes for Entities and Logic

Model Layer

Core Classes for Entities and Logic

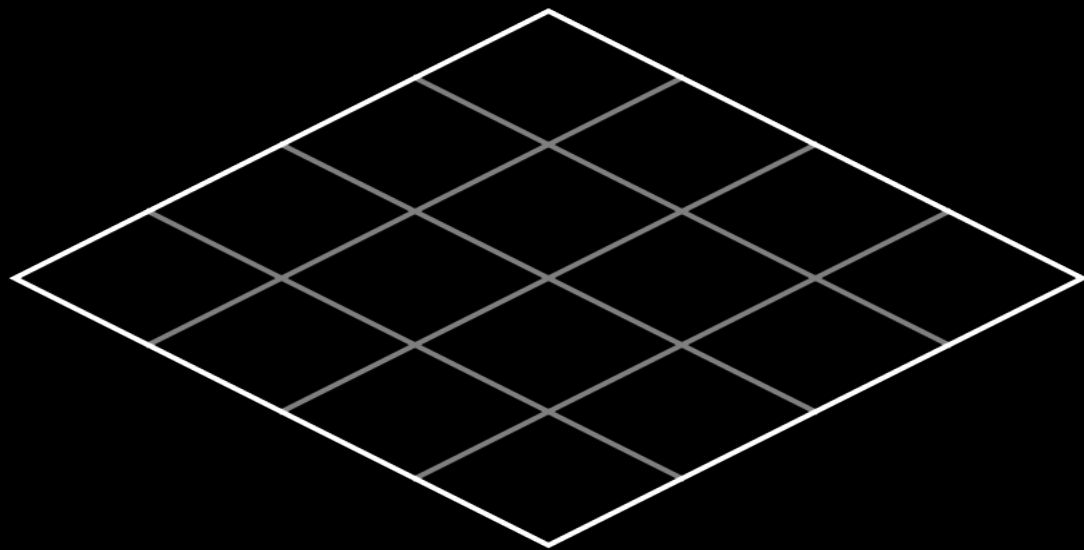
GridMap



Model Layer

Core Classes for Entities and Logic

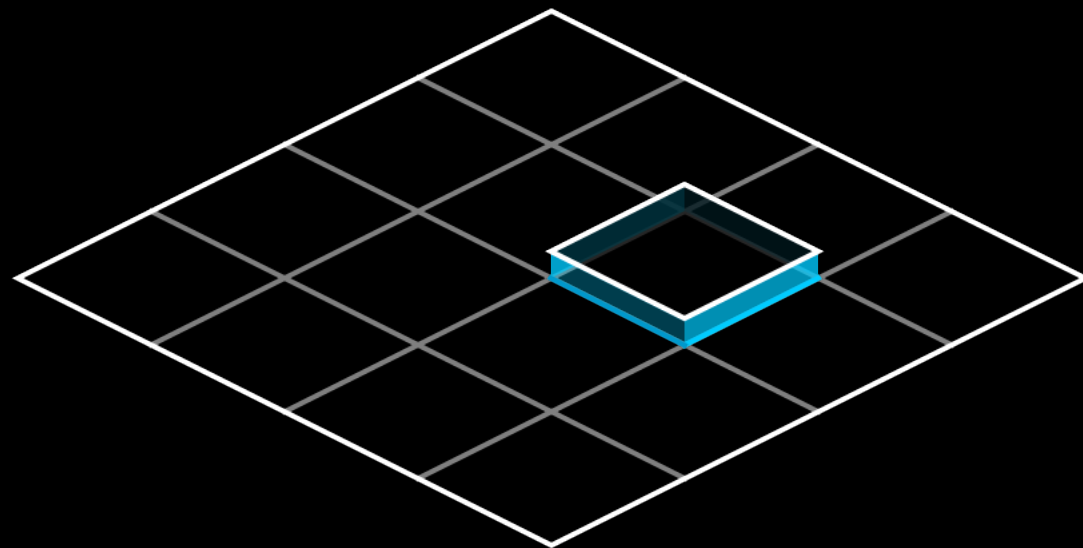
GridMap



Model Layer

Core Classes for Entities and Logic

GridMap

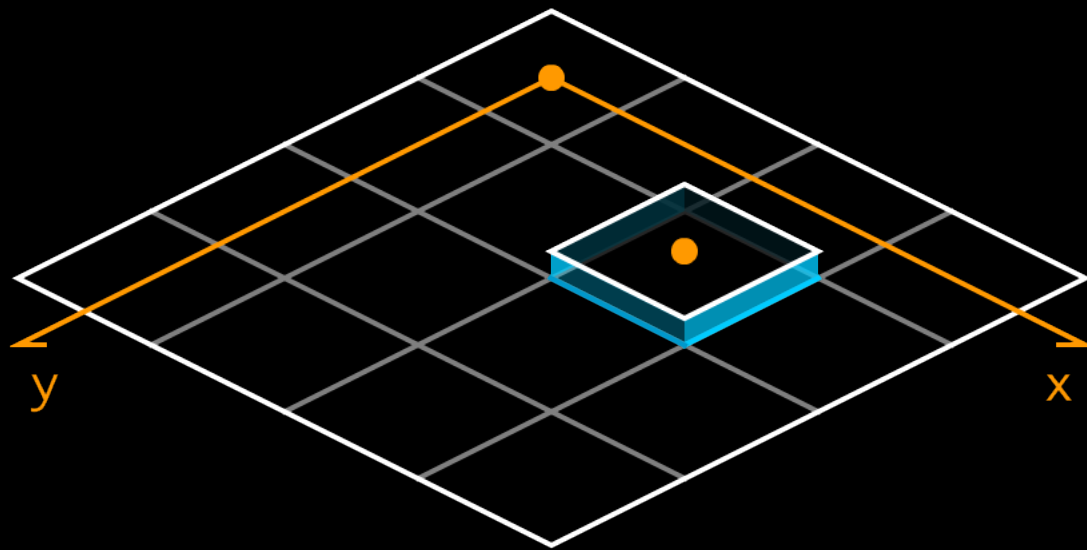


MapItem

Model Layer

Core Classes for Entities and Logic

GridMap



MapItem

MapPoint

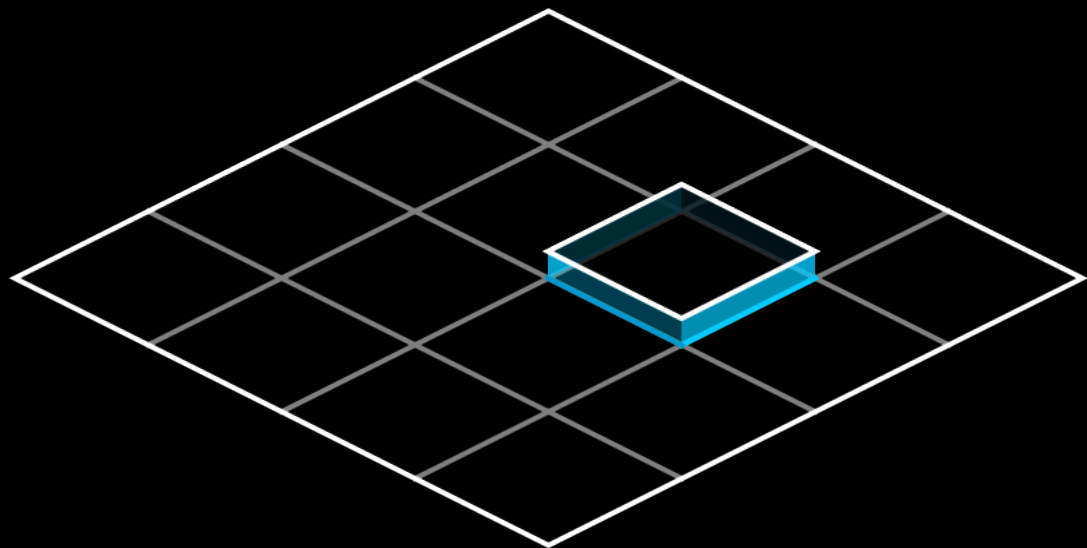
x:double

y:double

Model Layer

Core Classes for Entities and Logic

GridMap



MapItem

MapPoint
x:double
y:double



Road On Grid



Tower On Grid

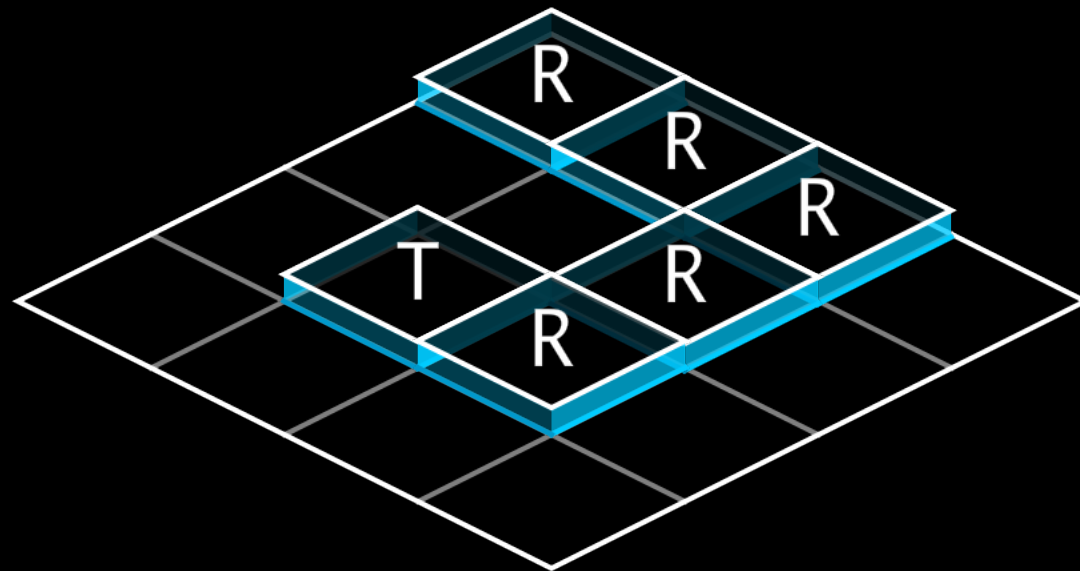


Critter

Model Layer

Core Classes for Entities and Logic

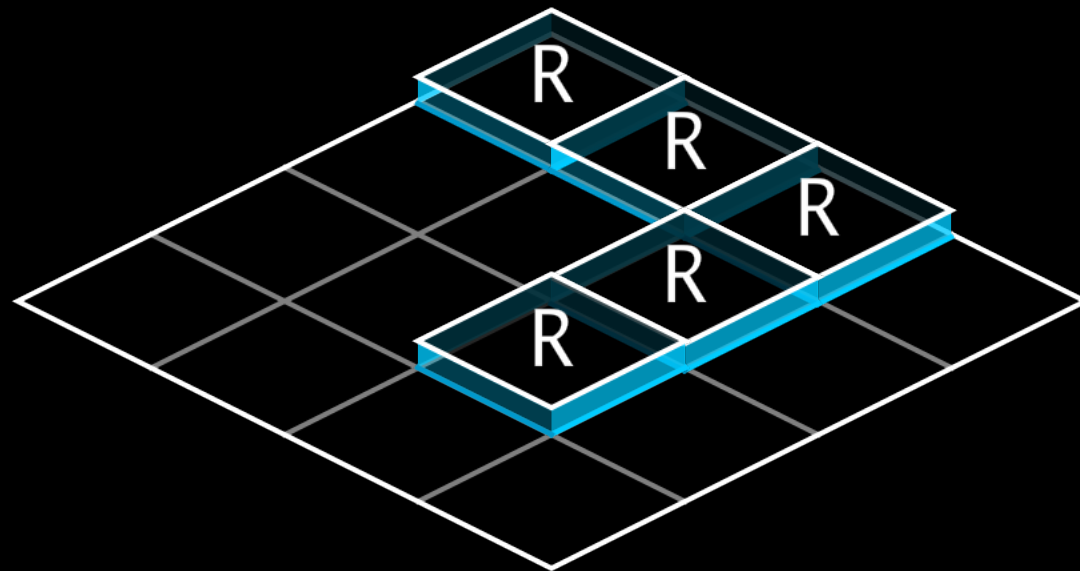
GridMap



Model Layer

Core Classes for Entities and Logic

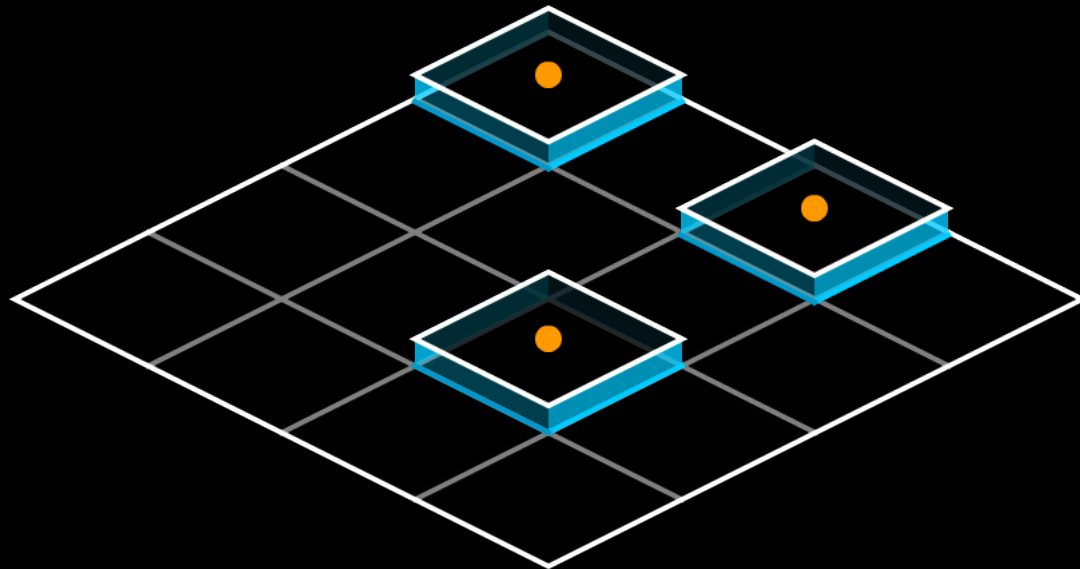
GridMap



Model Layer

Core Classes for Entities and Logic

GridMap



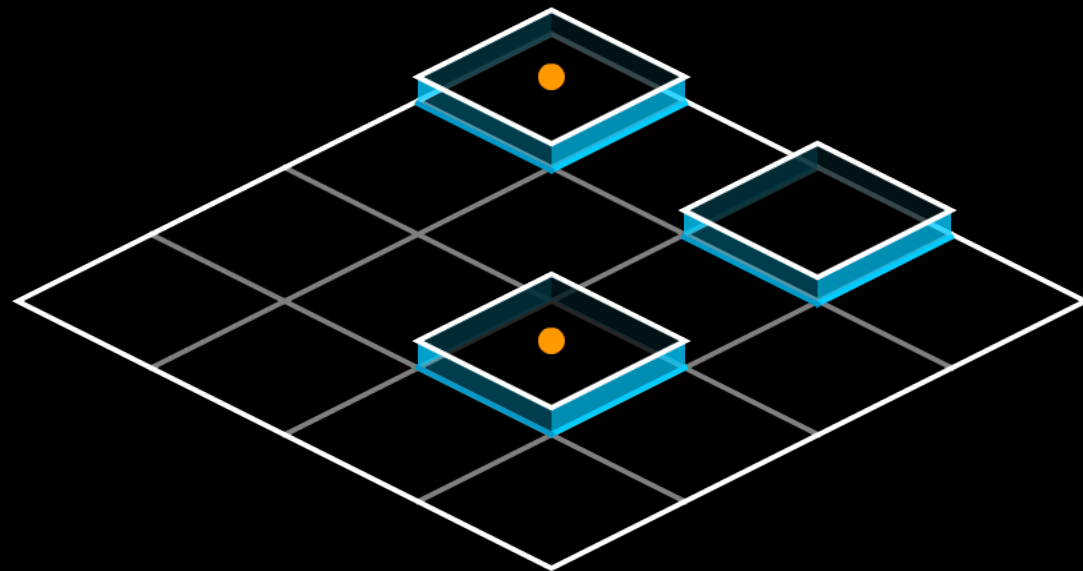
MapPath

```
locations:MapPoint  
goAlong(distance:double):double
```

Model Layer

Core Classes for Entities and Logic

GridMap



```
startPoints: [MapPoint]  
endPoints: [MapPoint]  
paths: [MapPath]
```

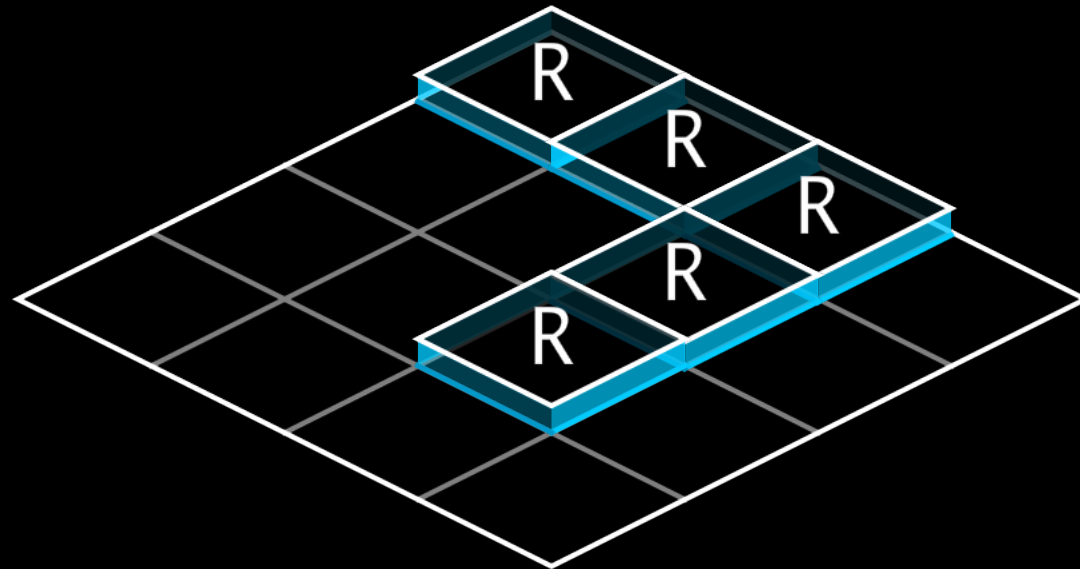
MapPath

```
locations: MapPoint
```

Model Layer

Saving & Loading a Map

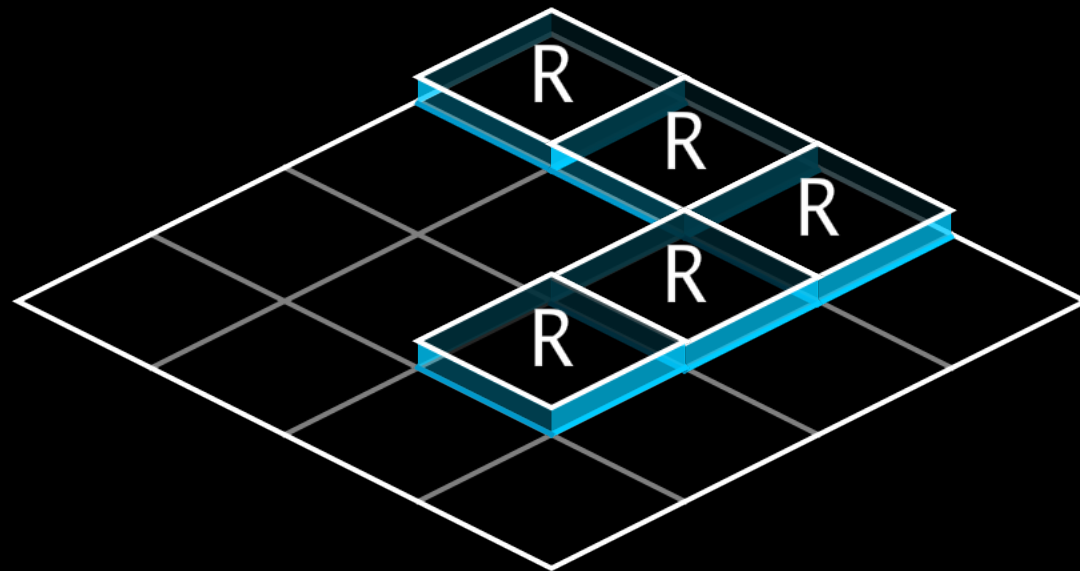
GridMap



Model Layer

Saving & Loading a Map

GridMap



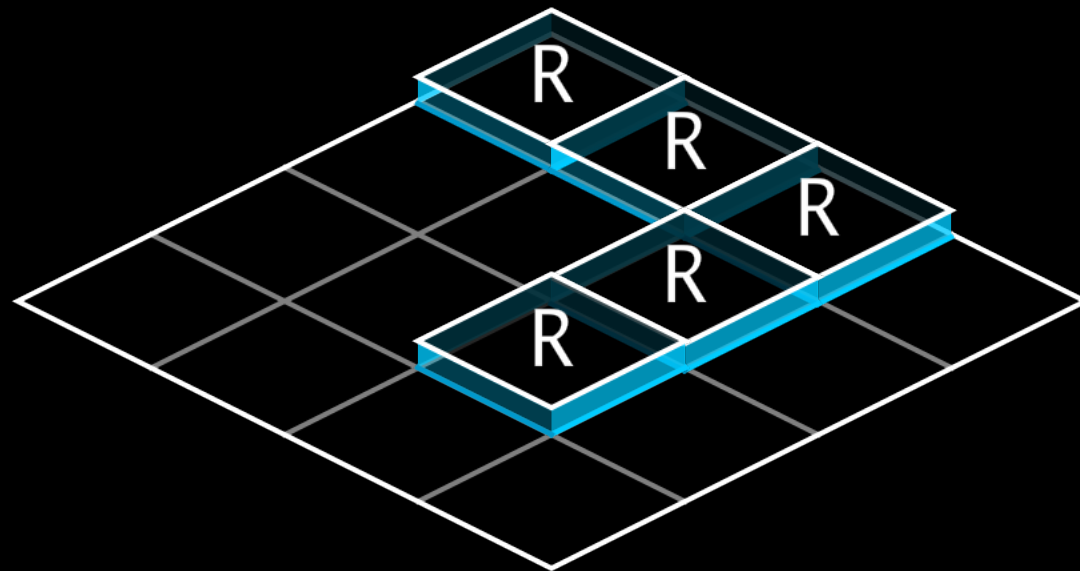
PathManager

```
gridMap:GridMap  
validate()  
validators:[PathValidator]
```

Model Layer

Saving & Loading a Map

GridMap



PathManager

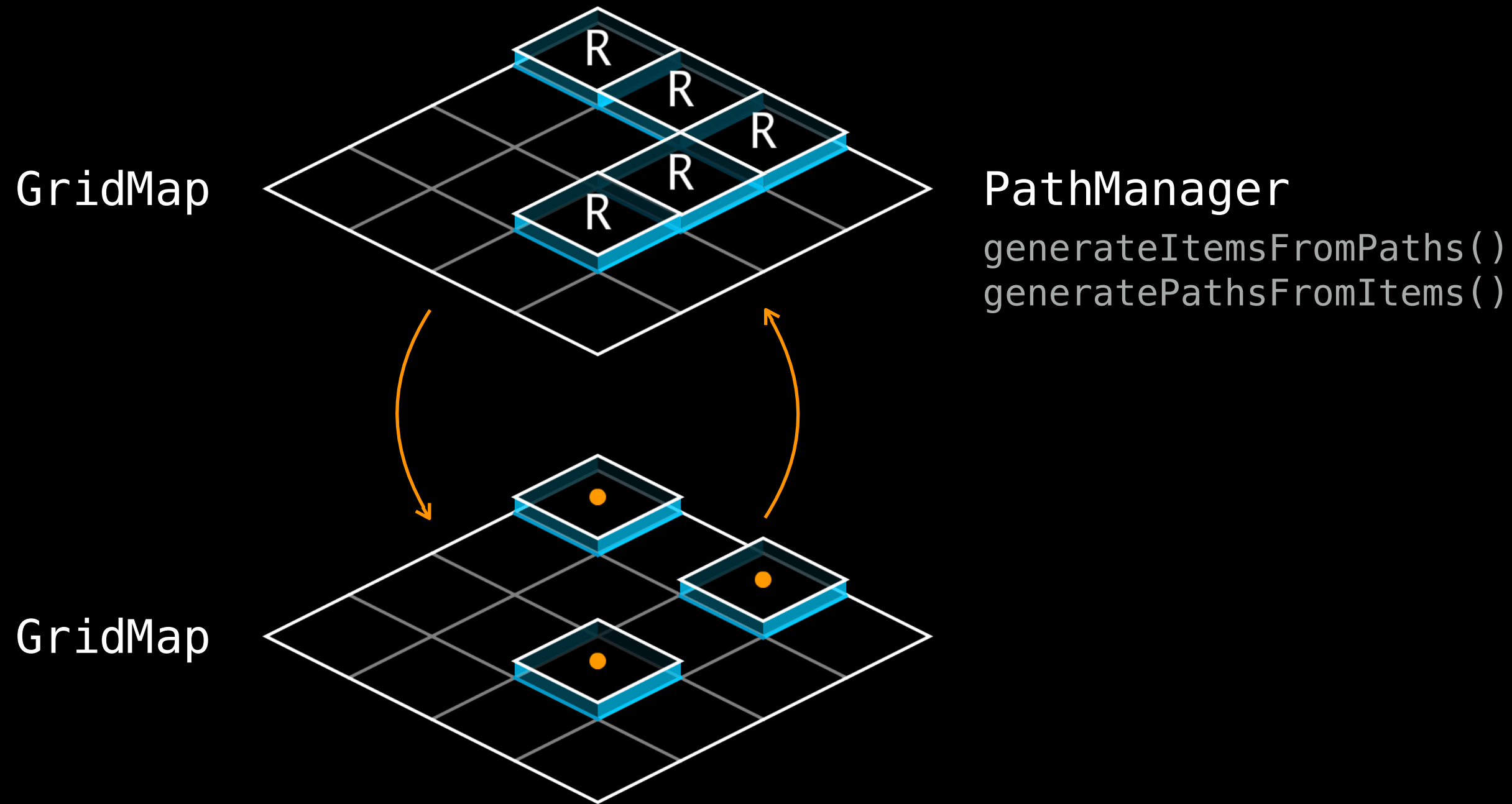
```
gridMap:GridMap  
validate()  
validators:[PathValidator]
```

PathValidator

```
gridMap:GridMap  
validate()
```

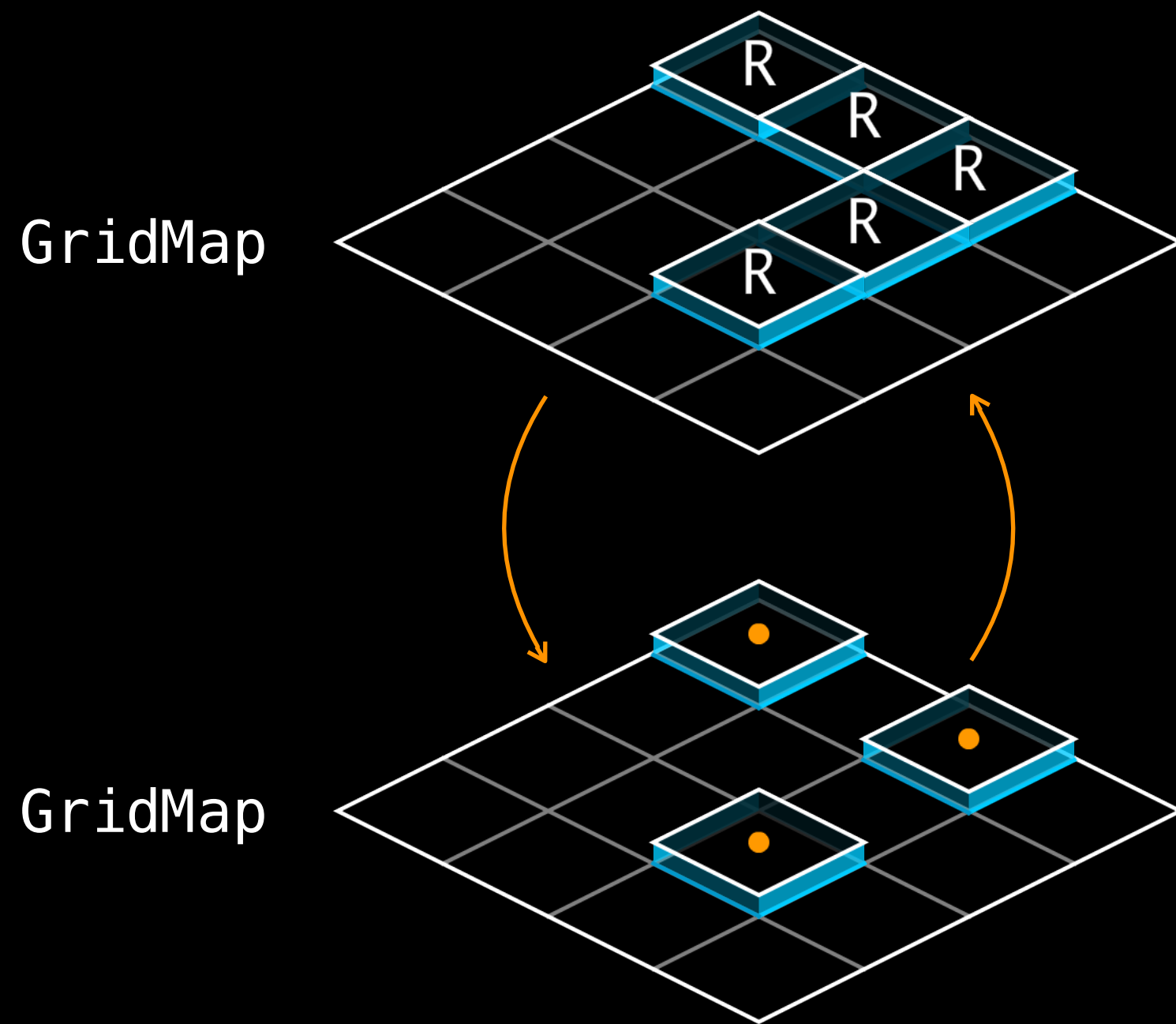

Model Layer

Saving & Loading a Map



Model Layer

Saving & Loading a Map



PathManager

```
generateItemsFromPaths()  
generatePathsFromItems()
```

PlayManager

```
save(file:File, play:Play)  
read(file:File):Play
```



xml

View Layer

Parallel from Swing

Custom Views

The diagram consists of two horizontal rectangular boxes, one above the other, both filled with a dark blue color and outlined in a lighter blue. The top box is labeled 'Custom Views' and the bottom box is labeled 'Swing'. There is a significant vertical gap between the two boxes, indicating they are parallel layers.

Swing

View Layer

Parallel from Swing

Custom Views

Parallel

Swing

View Layer

Parallel from Swing

Custom Views

ViewFlow, GridView, MapView, InspectorView

Parallel

Window, View, Label, Button, TextField

Swing

JFrame, JPanel, JLabel, JButton, JTextField

View Layer

Core Classes for Displaying

View

```
init()  
initSubviews()  
initEvents()
```

ViewFlow

```
views:[View]  
push(view:View)  
pop()
```

GridView & MapView

```
map displaying
```

InspectorView

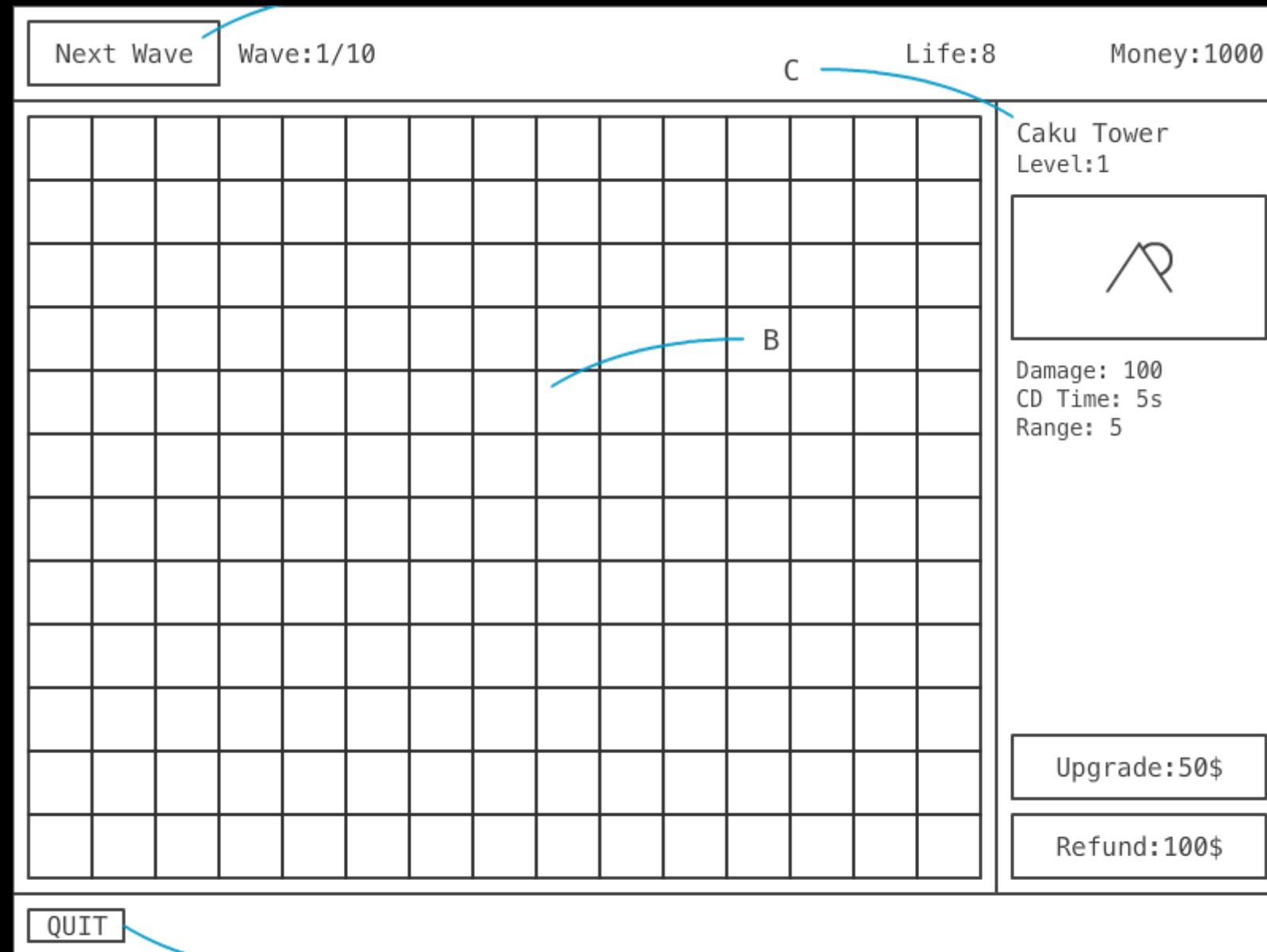
```
on:IInspectable
```

XxxxxxxxScene

```
role as a controller  
assemble views  
coordinate with V & M
```

View Layer

Core Classes for Displaying



PlayingScene

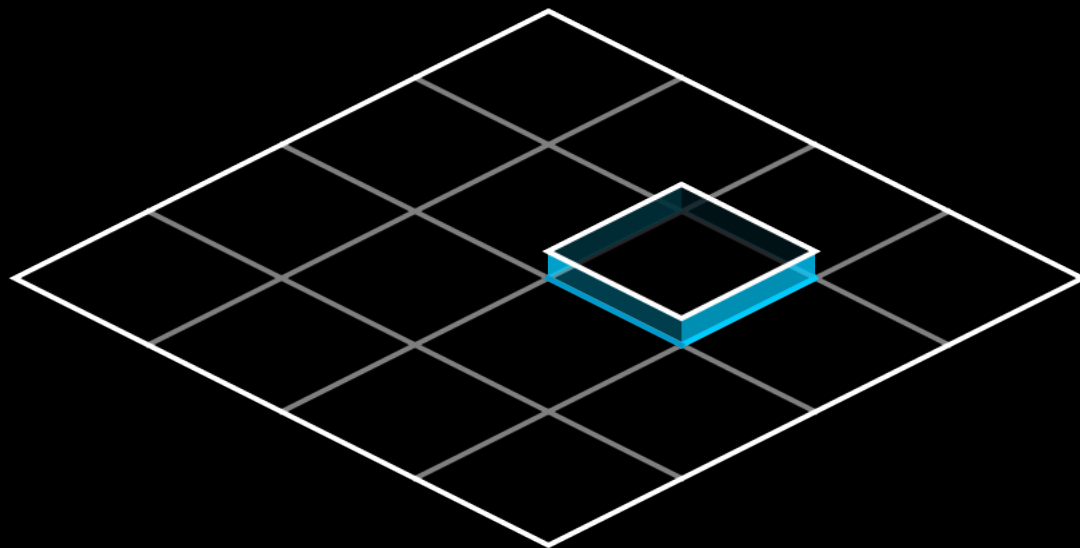
View Layer

Core Classes for Displaying a Map

View Layer

Core Classes for Displaying a Map

GridMap



MapItem

MapPoint

x:double
y:double



Road



Tower

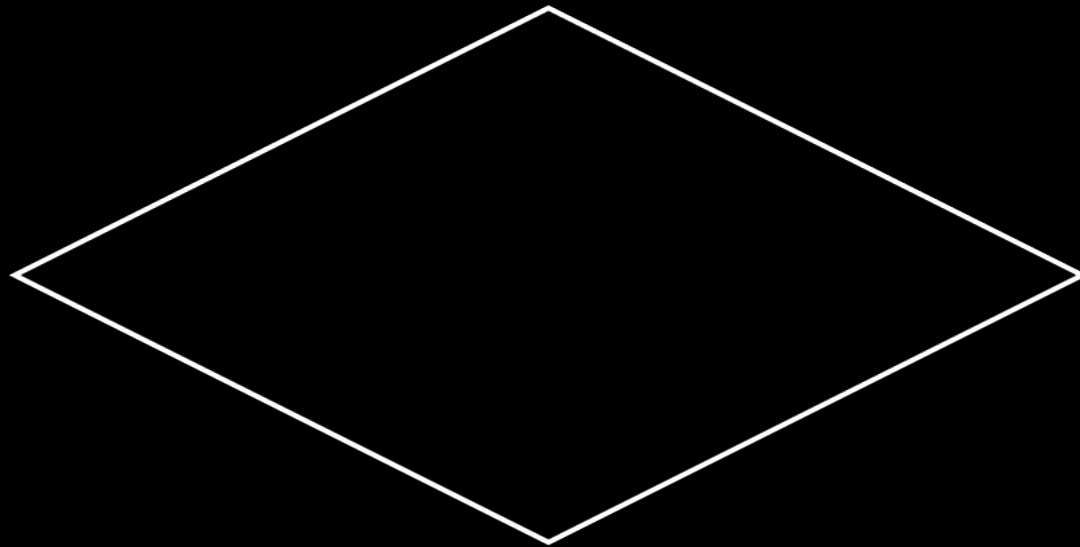


Critter

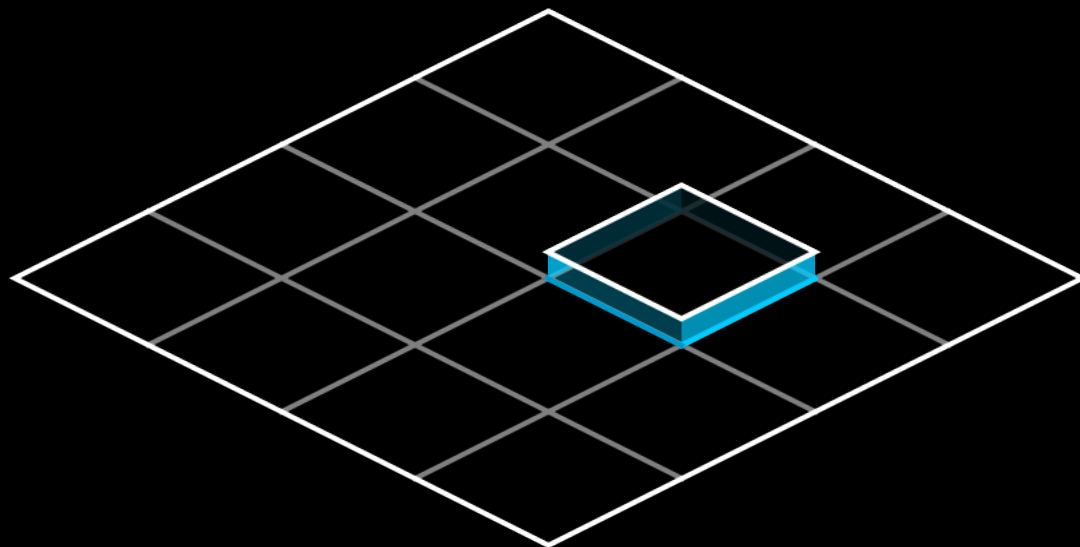
View Layer

Core Classes for Displaying a Map

GridView



GridMap



MapItem

MapPoint

x:double

y:double



Road

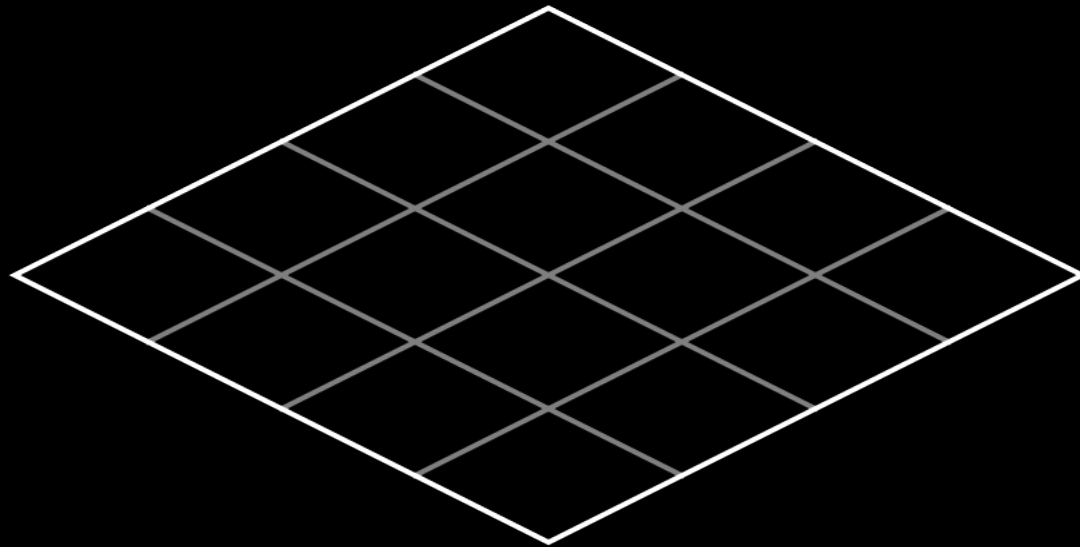


Tower

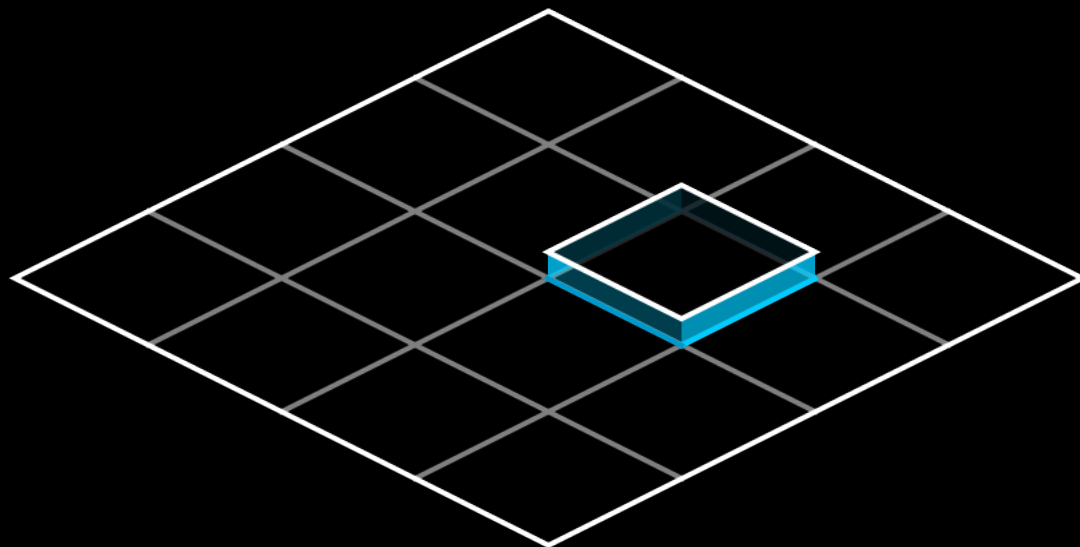
View Layer

Core Classes for Displaying a Map

GridView



GridMap



MapItem

MapPoint

x:double

y:double



Road

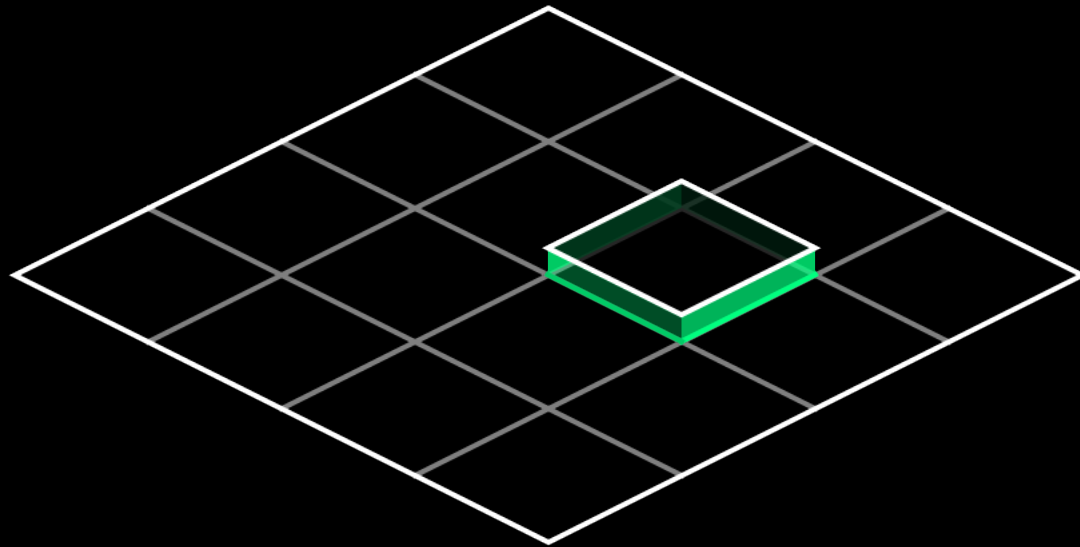


Tower

View Layer

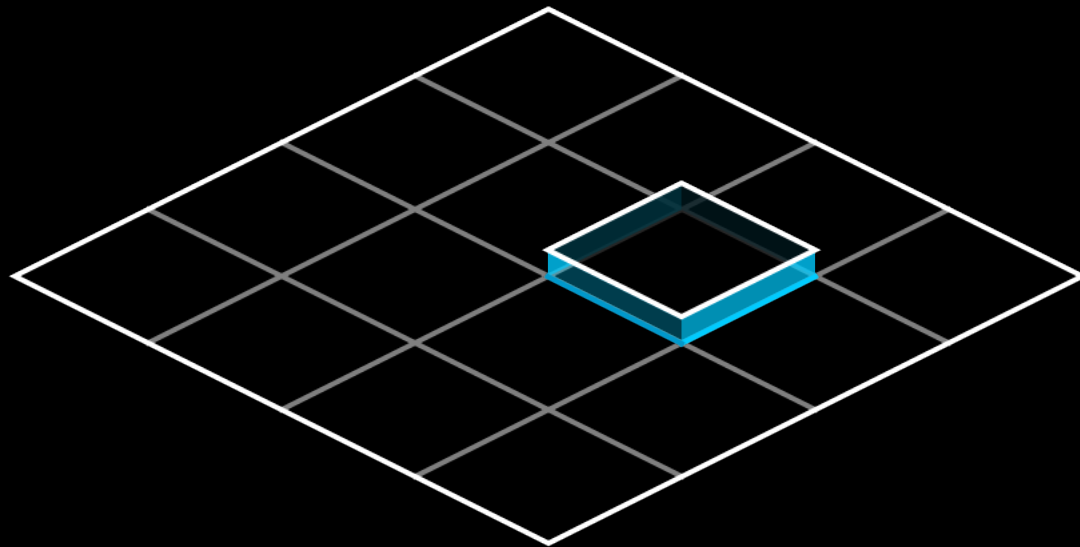
Core Classes for Displaying a Map

GridView



GridViewCell

GridMap



MapItem

MapPoint

x:double

y:double



Road

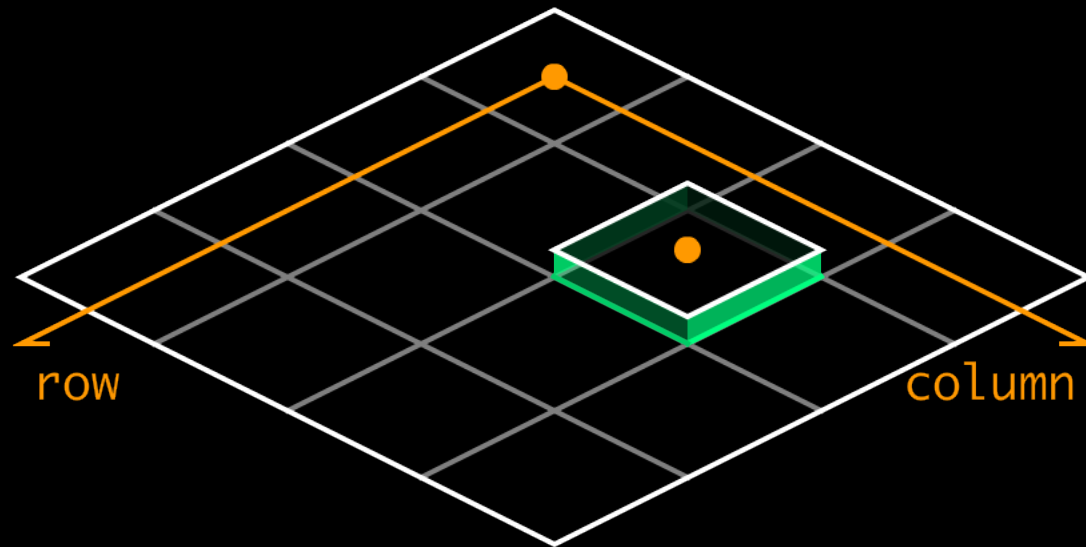


Tower

View Layer

Core Classes for Displaying a Map

GridView

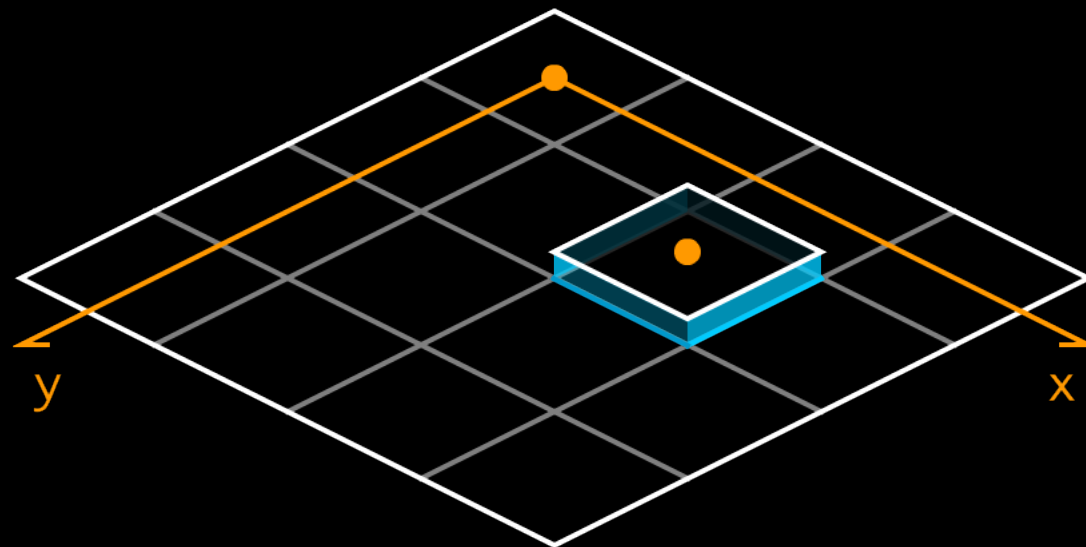


GridViewCell

GridPoint

row:int
column:int

GridMap



MapItem

MapPoint

x:double
y:double



Road

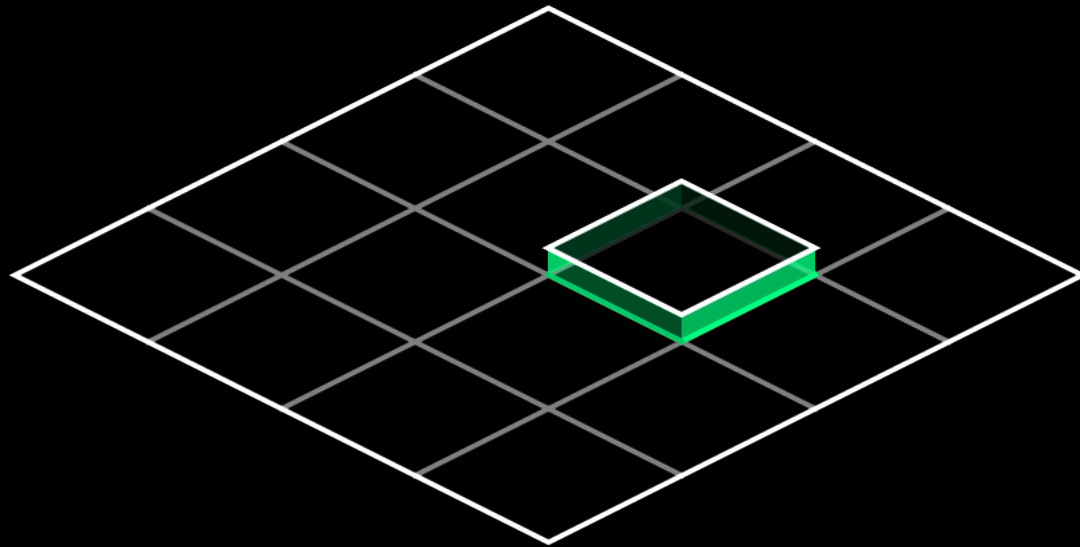


Tower

View Layer

Core Classes for Displaying a Map

GridView

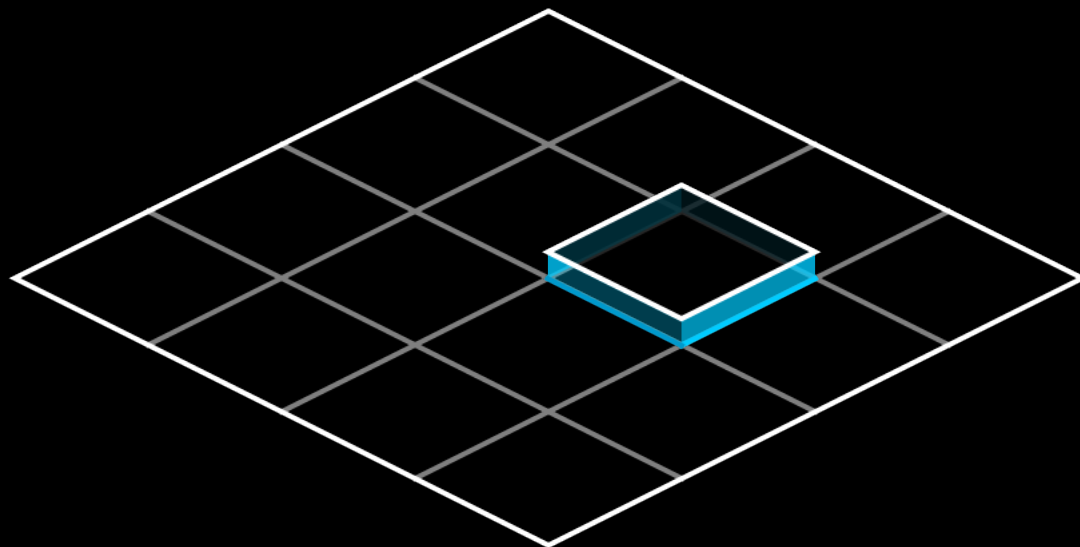


GridViewCell

GridPoint

row:int
column:int

GridMap



MapItem

MapPoint

x:double
y:double



Road



Tower

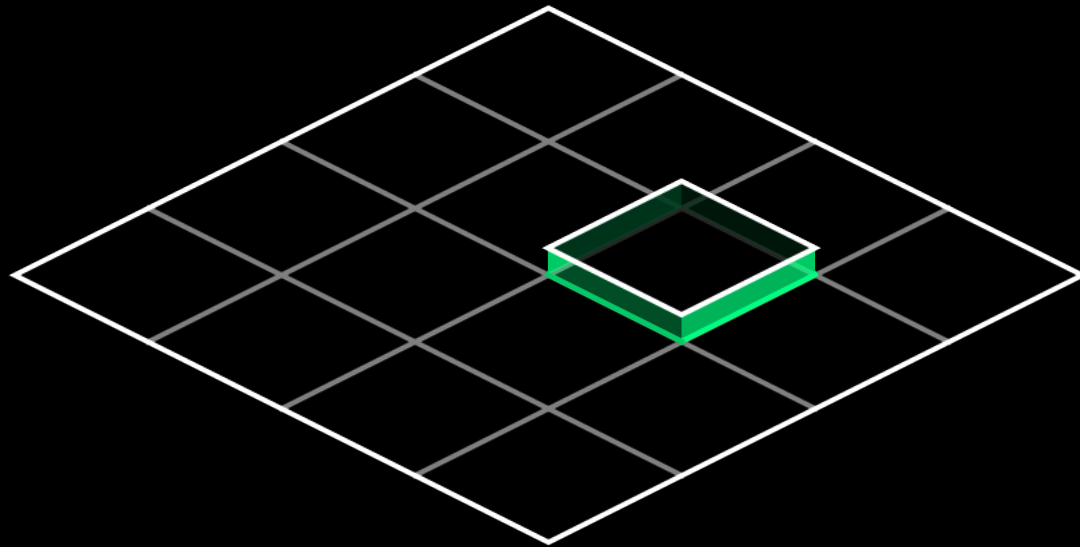
View Layer

Core Classes for Displaying a Map

MapView

map:GridMap

GridView



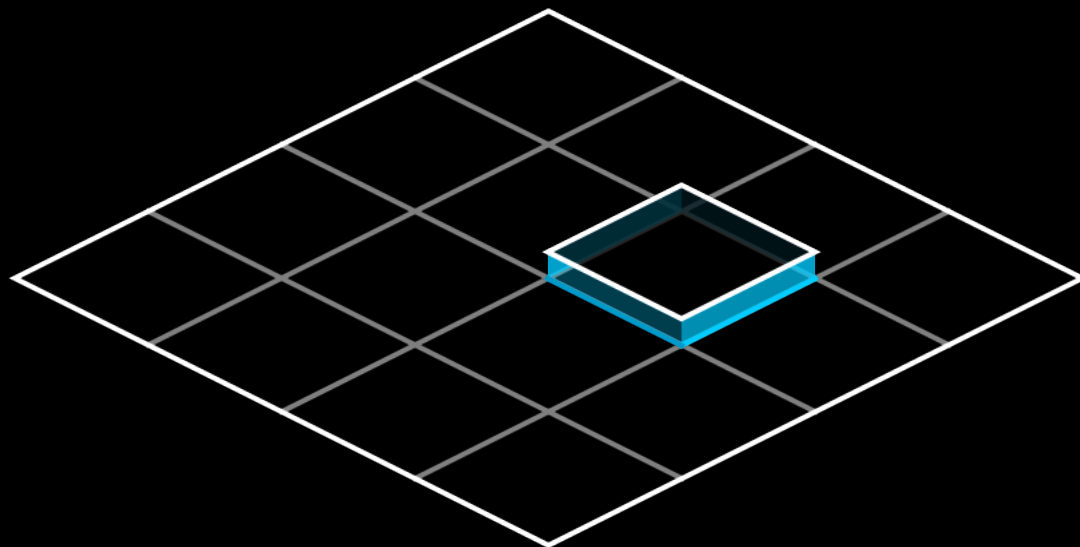
GridViewCell

GridPoint

row:int

column:int

GridMap



MapItem

MapPoint

x:double

y:double



Road



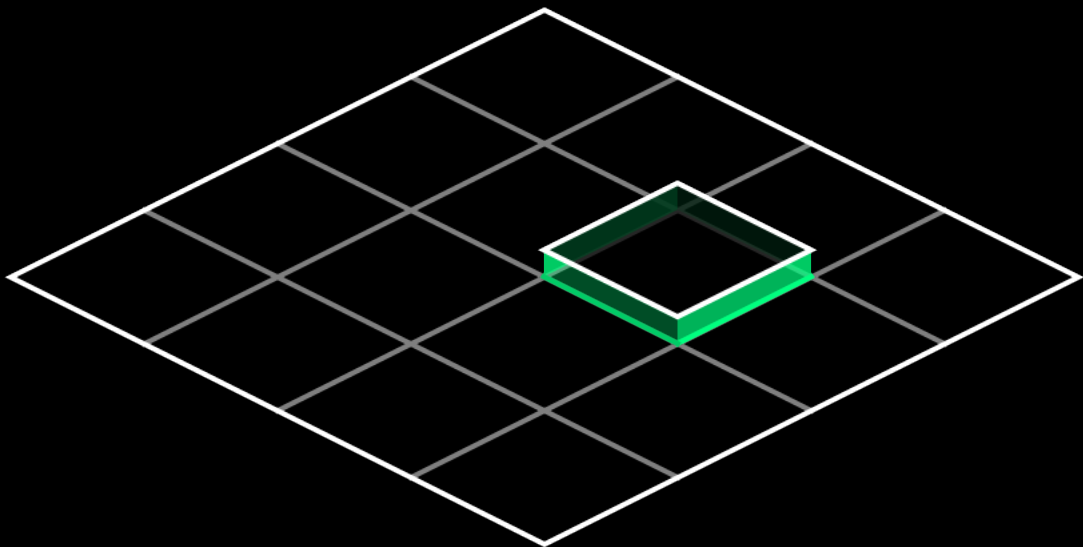
Tower

View Layer

Core Classes for Displaying a Map

MapView
map:GridMap

GridView

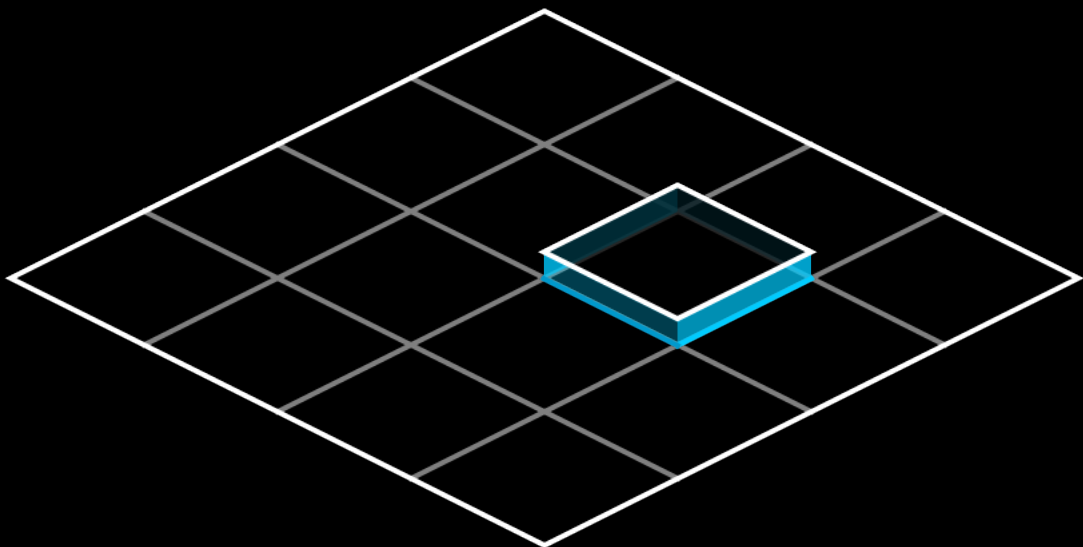


MapItemCell
item:MapItem

GridViewCell

GridPoint
row:int
column:int

GridMap



MapItem

MapPoint
x:double
y:double



Road



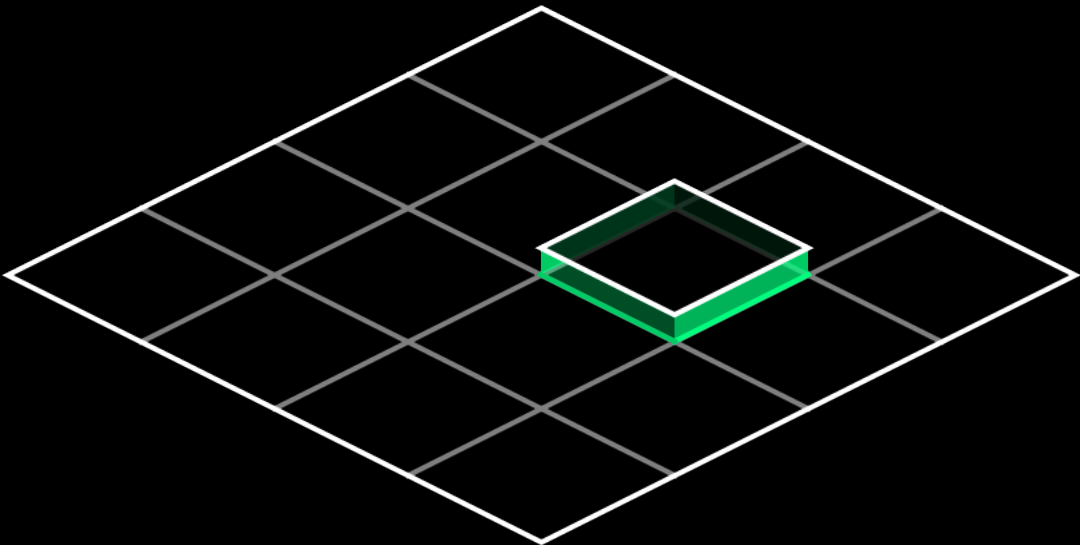
Tower

View Layer

Core Classes for Displaying a Map

MapView
map:GridMap

GridView

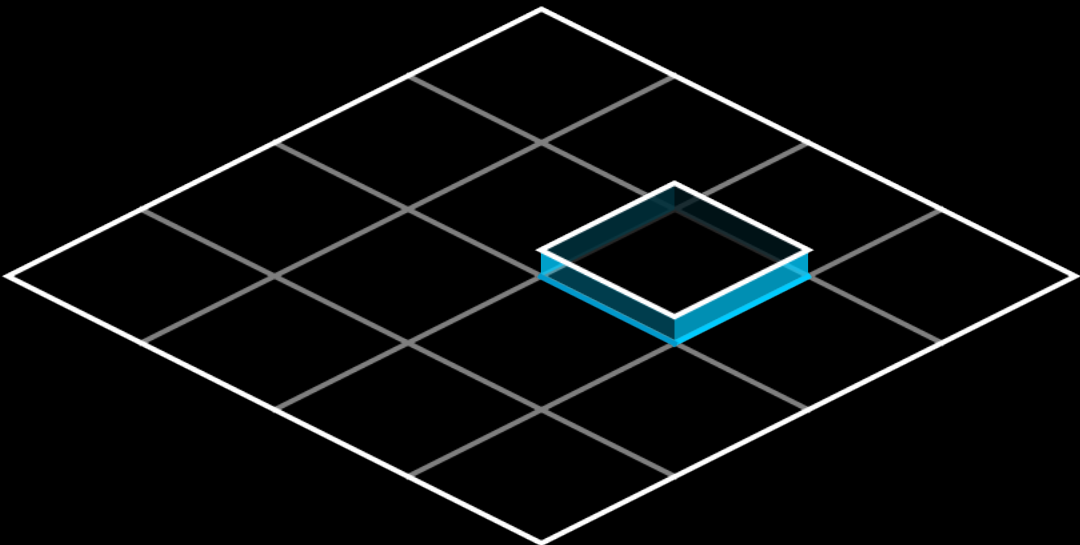


MapItemCell
item:MapItem

GridViewCell

GridPoint
row:int
column:int

GridMap



MapItem

MapPoint
x:double
y:double



RoadCell



TowerCell



SceneryCell



Road



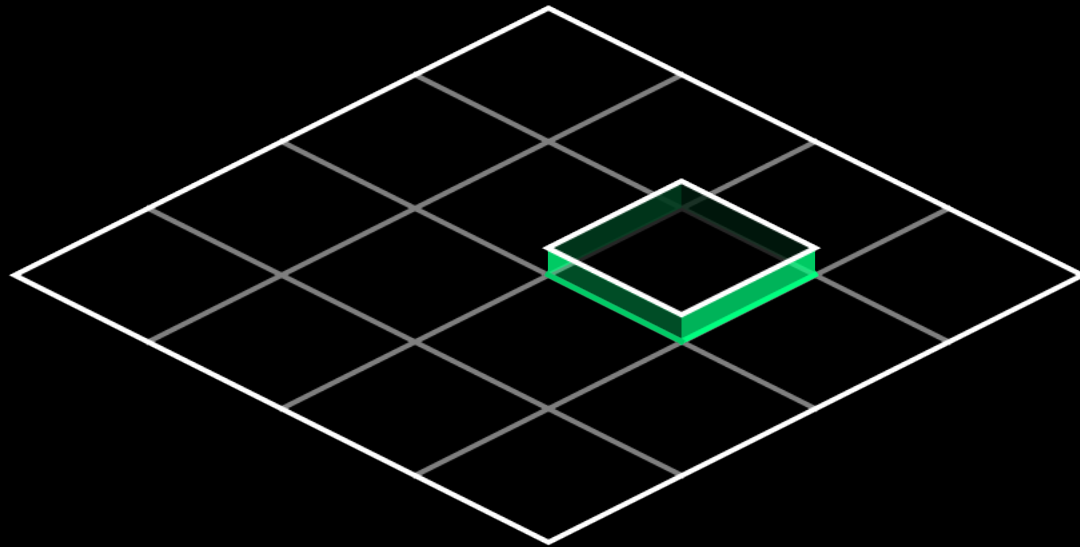
Tower

View Layer

Core Classes for Displaying a Map

MapView

GridView



RoadCell

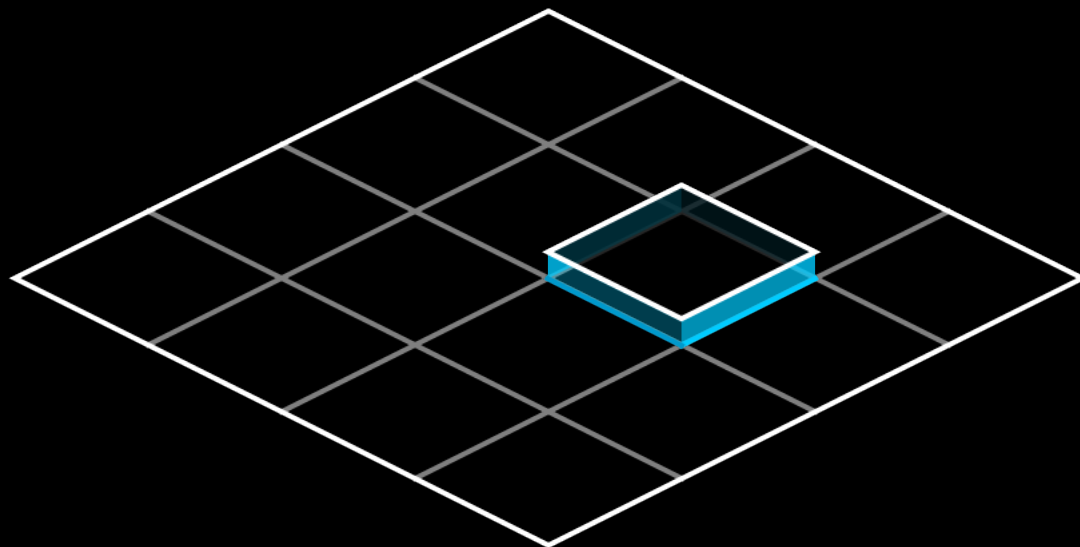


TowerCell



SceneryCell

GridMap



Road



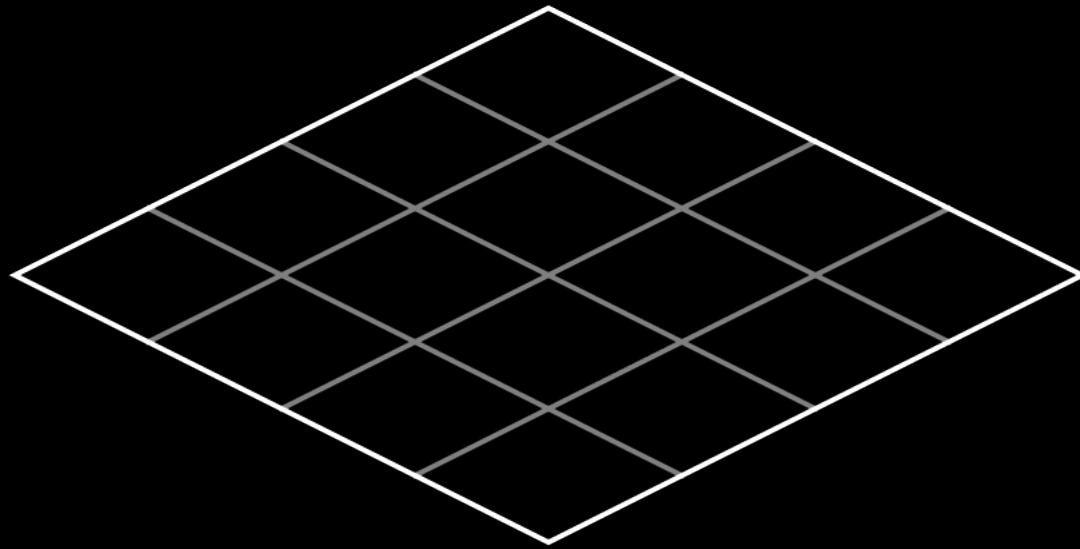
Tower

View Layer

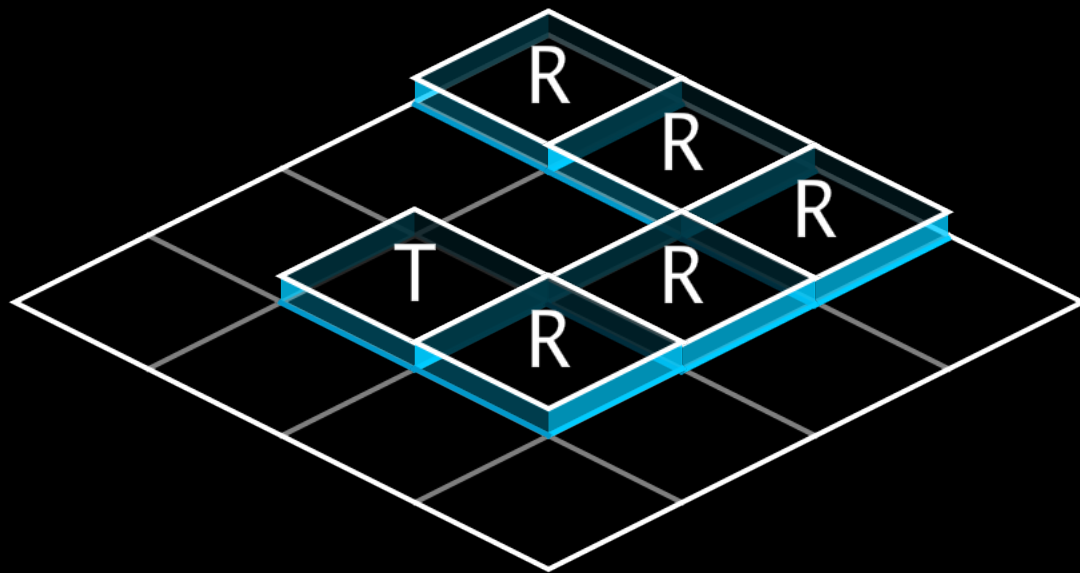
Core Classes for Displaying a Map

MapView

GridView



GridMap



RoadCell



TowerCell



SceneryCell



Road

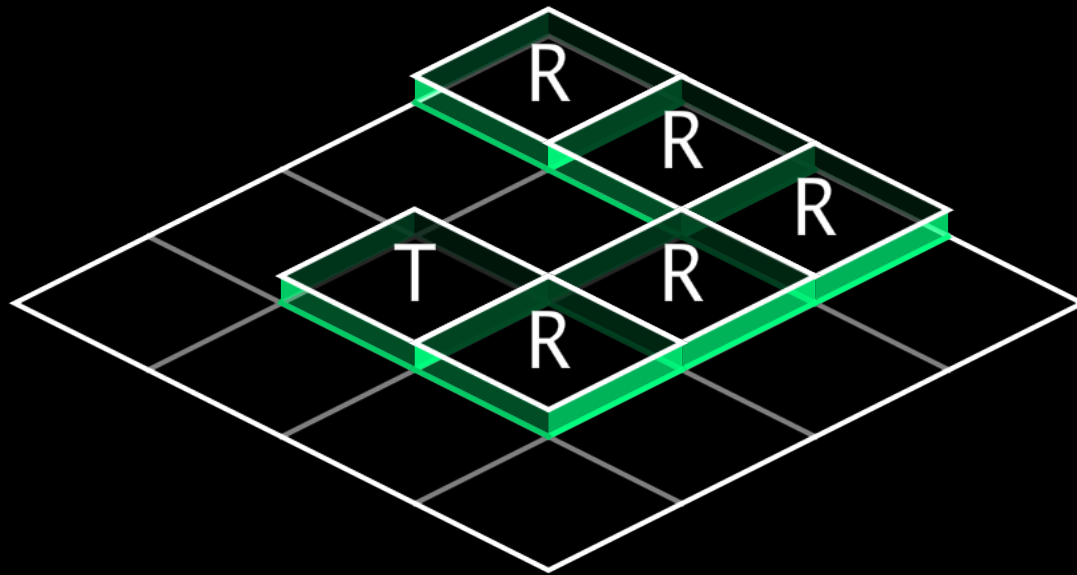


Tower

View Layer

Core Classes for Displaying a Map

MapView
GridView



RoadCell

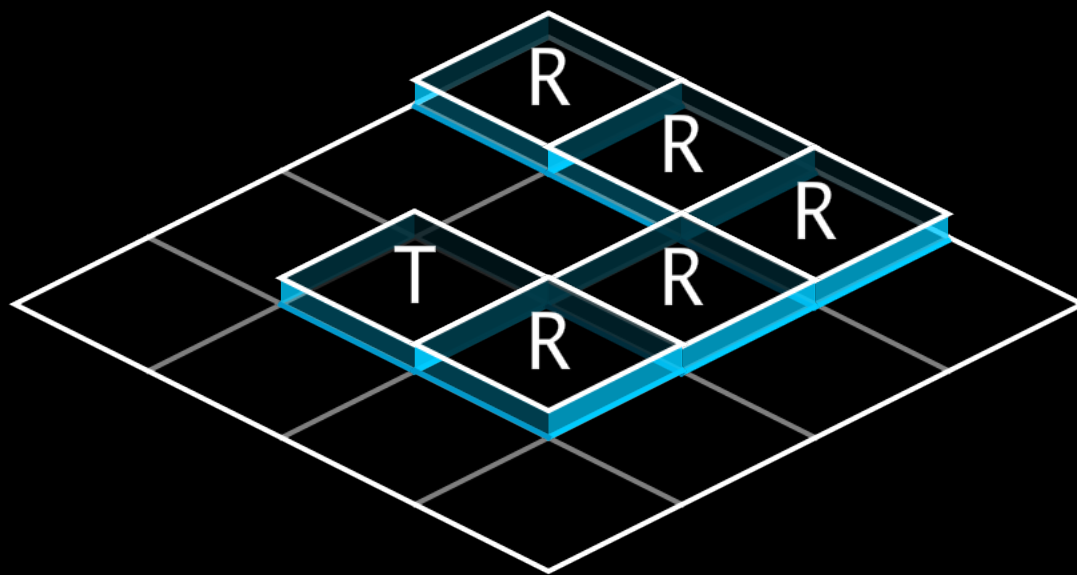


TowerCell



SceneryCell

GridMap



Road

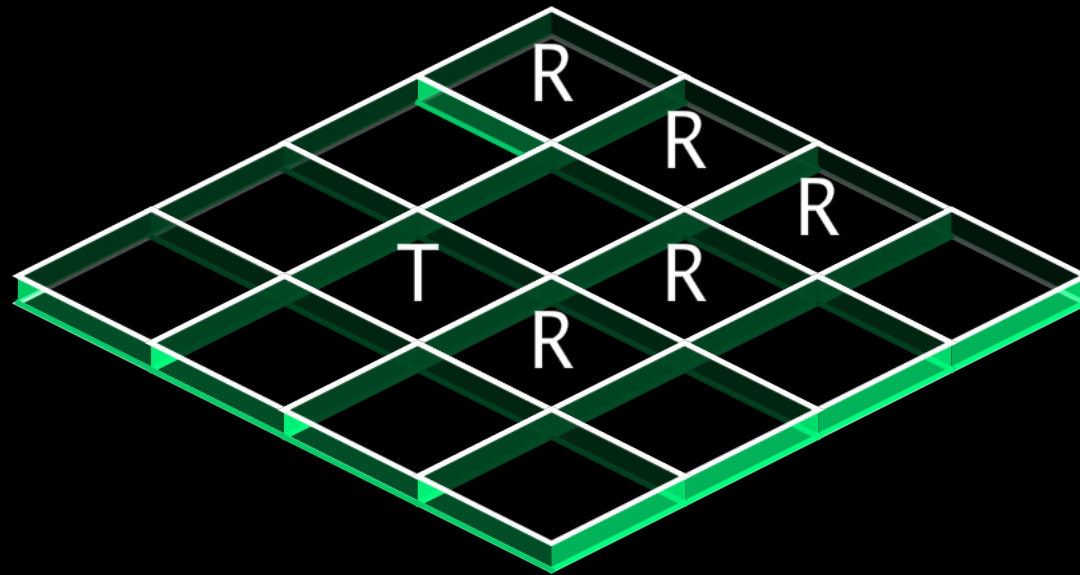


Tower

View Layer

Core Classes for Displaying a Map

MapView
GridView



RoadCell

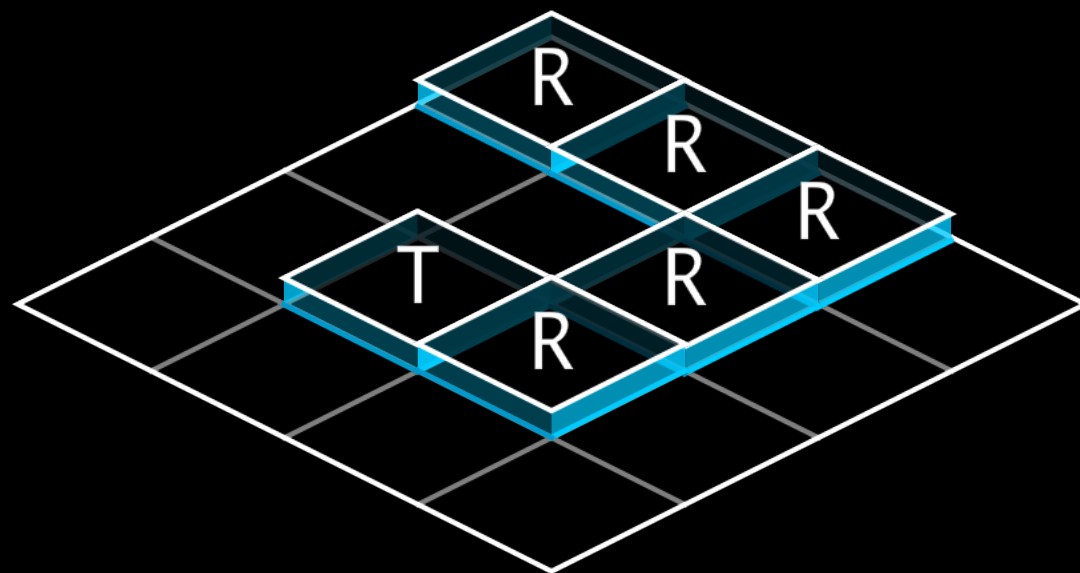


TowerCell



SceneryCell

GridMap



Road

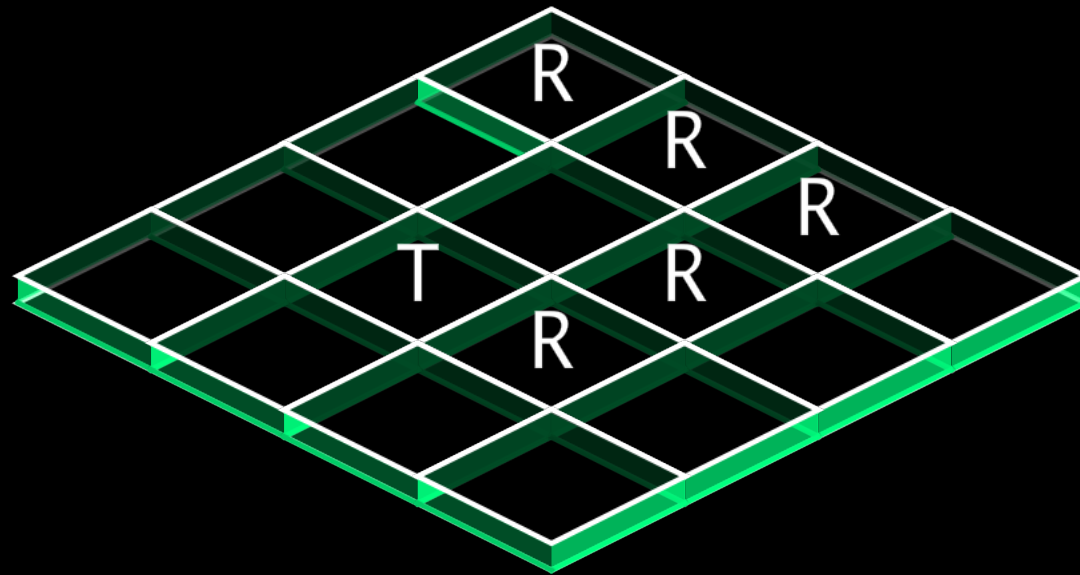


Tower

View Layer

Design Pattern Usage

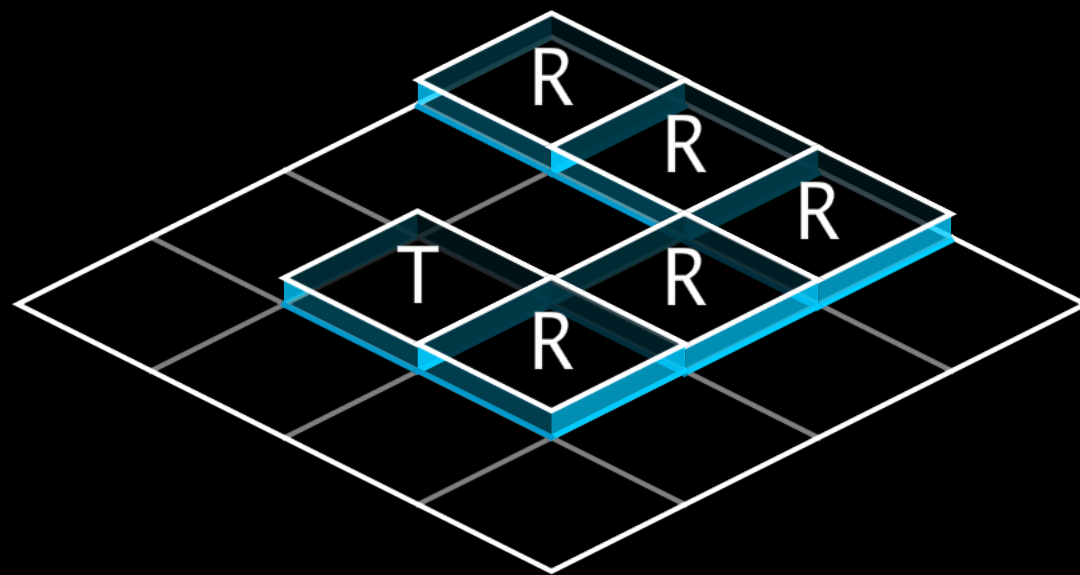
MapView



MapItemCell TowerCell



GridMap



MapItem

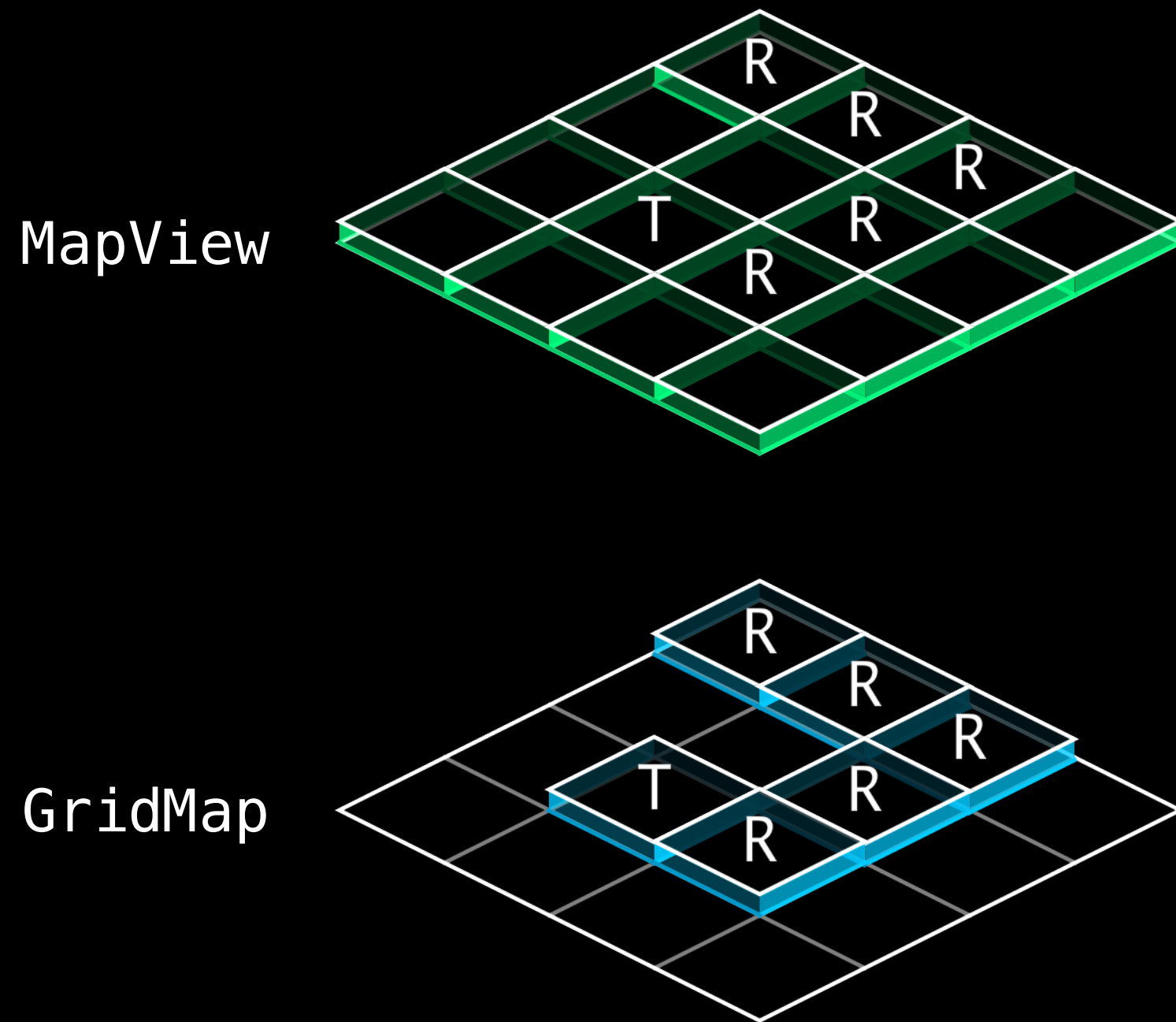


Tower

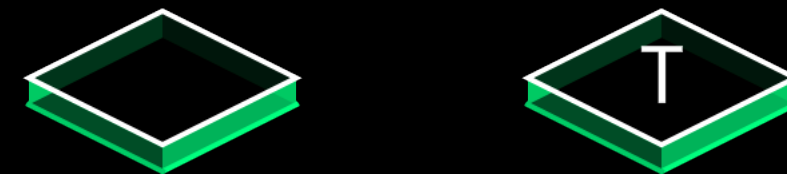


View Layer

Design Pattern Usage



MapItemCell TowerCell



observe

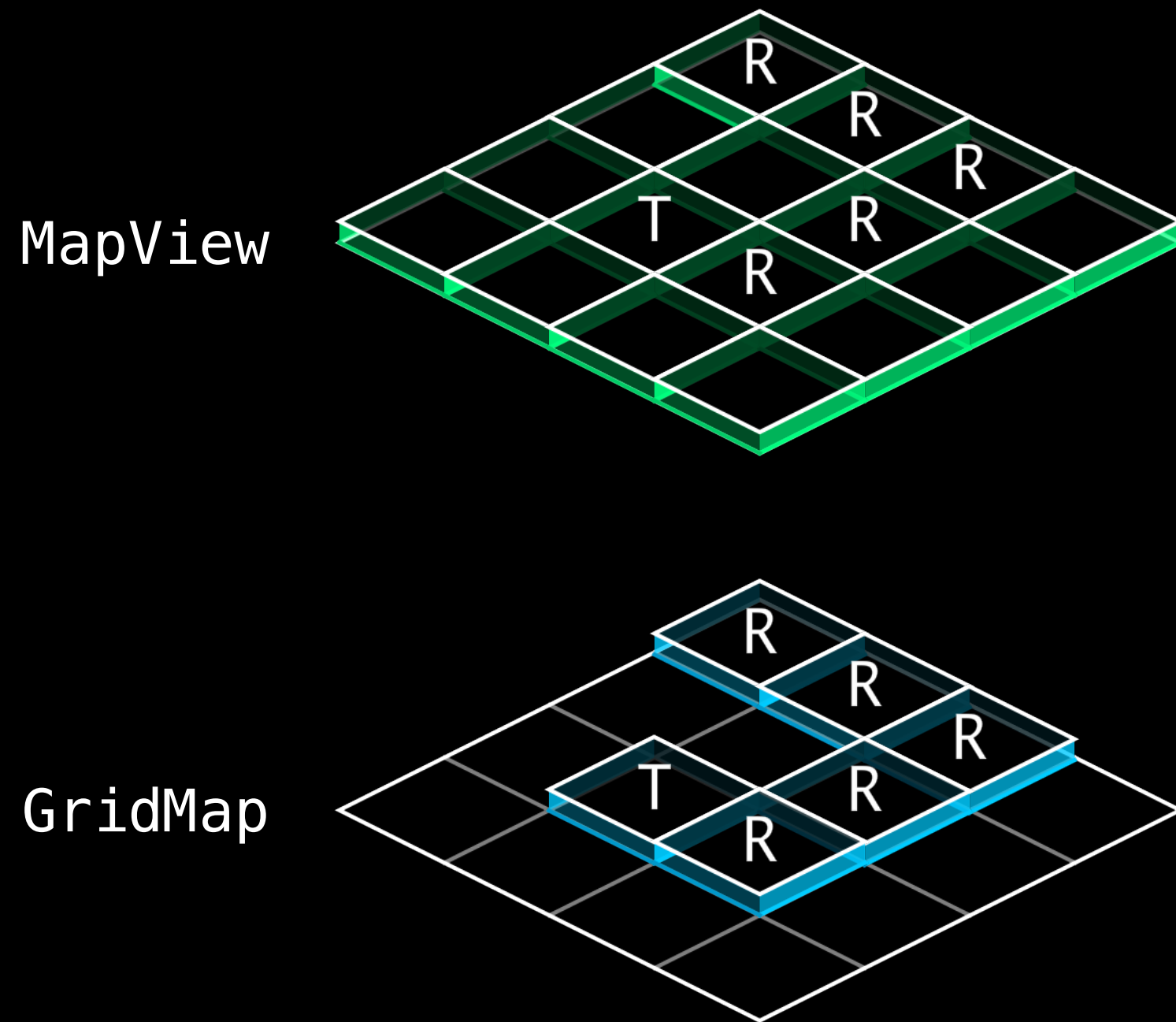


MapItem

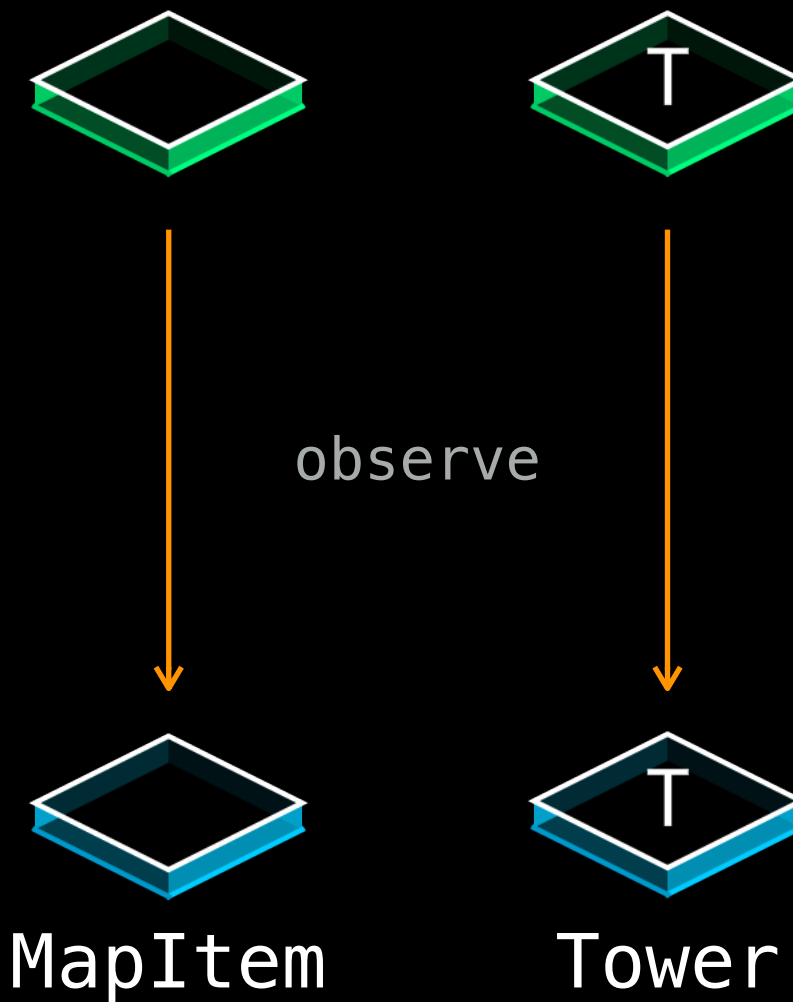
Tower

View Layer

Design Pattern Usage

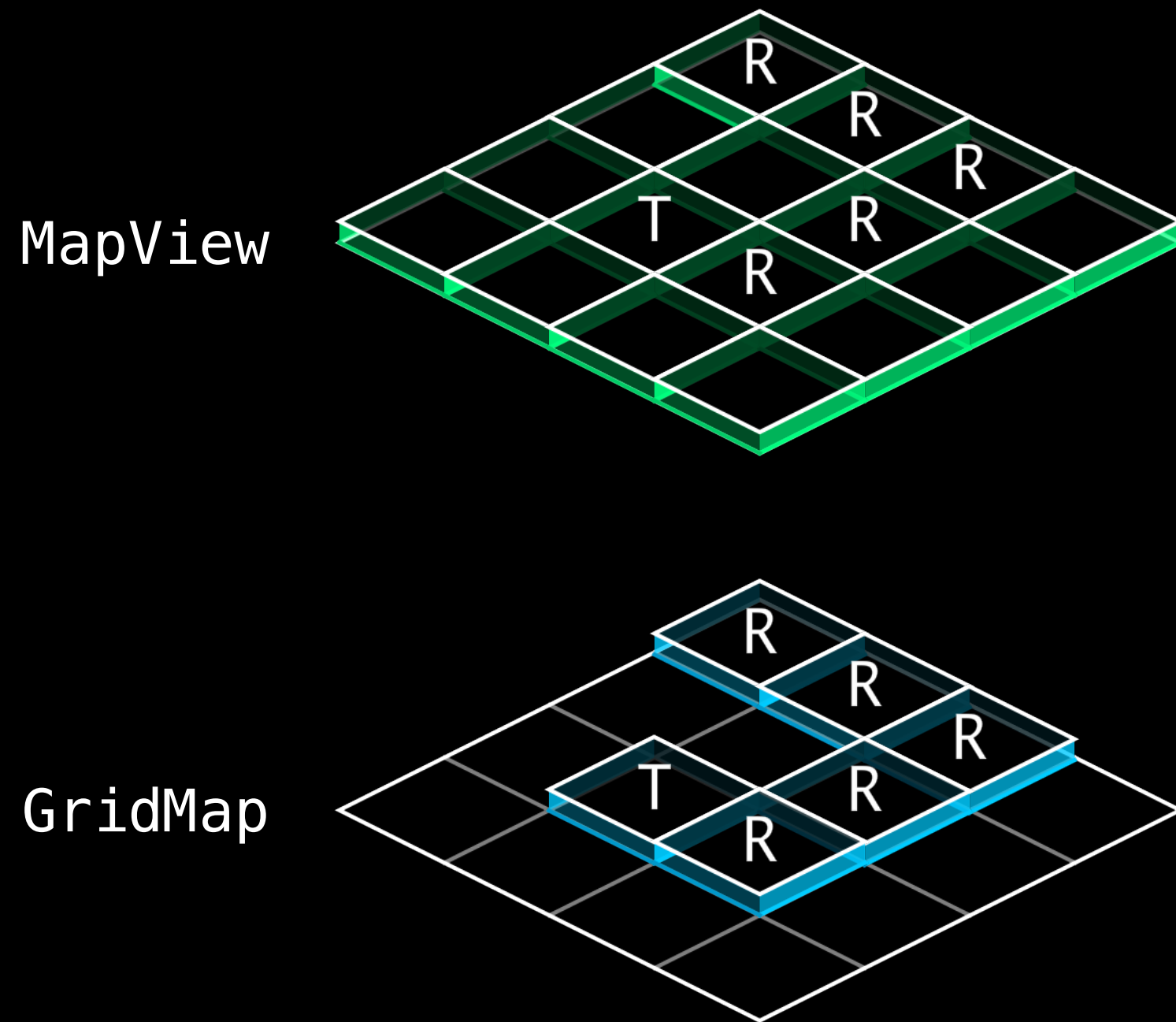


MapItemCell TowerCell



View Layer

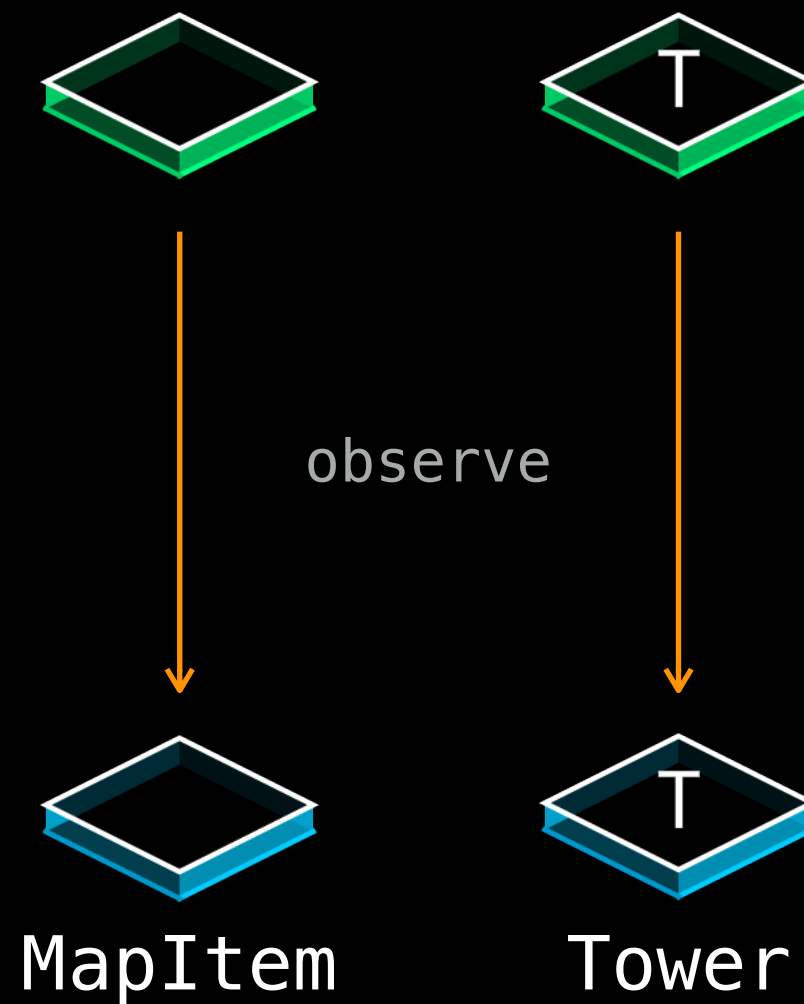
Design Pattern Usage



MapItemCellFactory

```
cellFromItem(item:MapItem):MapItemCell
```

MapItemCell TowerCell



Other

Design Pattern Usage

Other

Design Pattern Usage

Play

Singleton - a shared instance which has coins, life and map

Other

Design Pattern Usage

Play

Singleton - a shared instance which has coins, life and map

Scene

Observer - Watch the coins and life change on Play, and update labels

Adapter - Some inner classes is responsible for transferring MapItem to IInspectable

Other

Tower Management



Tower

Other

Tower Management



Tower

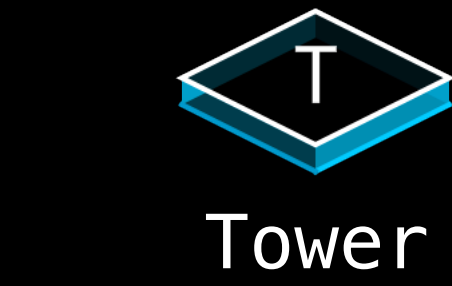
inherit



ConcreteTower

Other

Tower Management



inherit

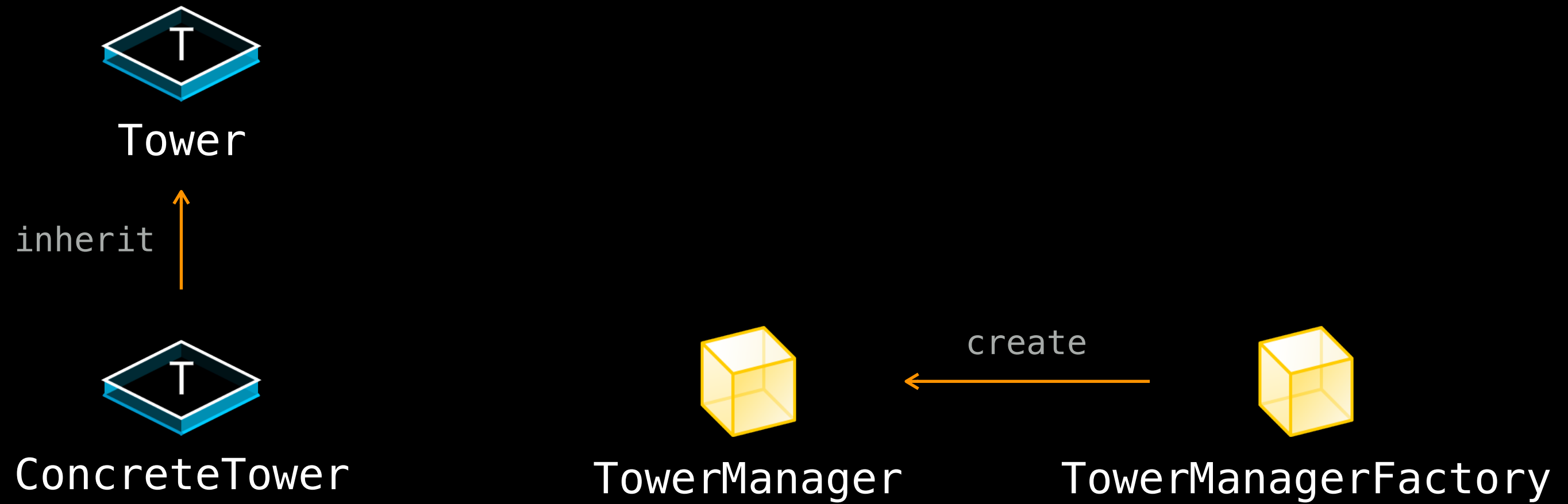


An orange arrow pointing upwards from the 'ConcreteTower' class to the 'Tower' class, indicating inheritance.



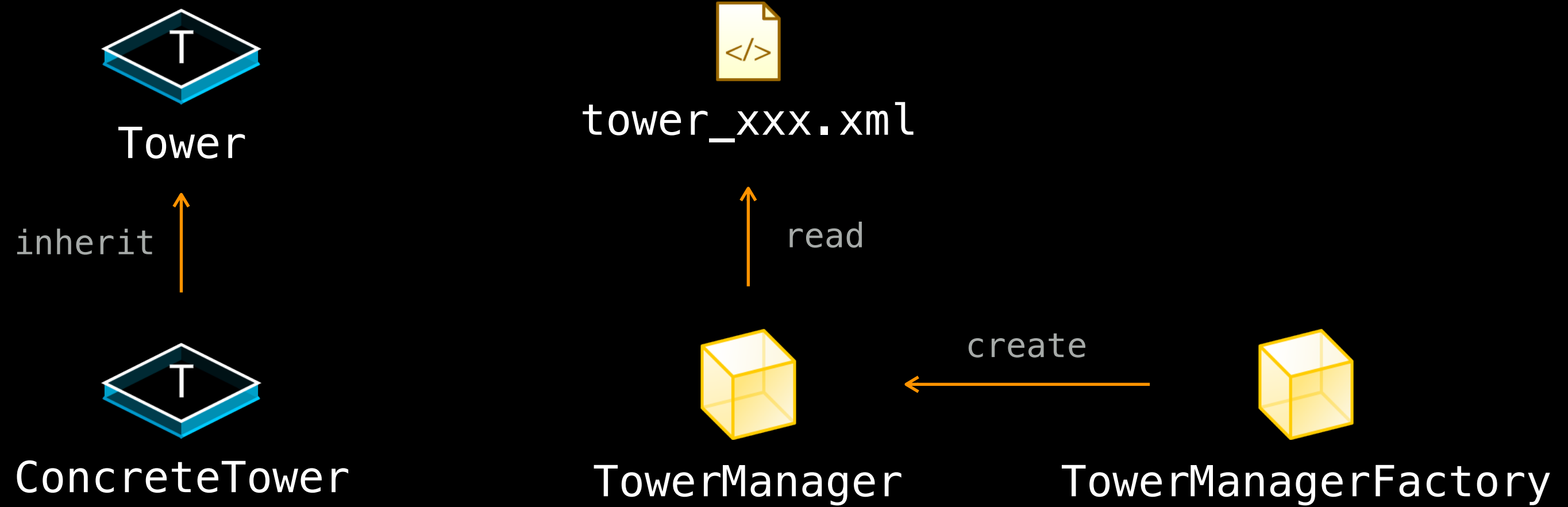
Other

Tower Management



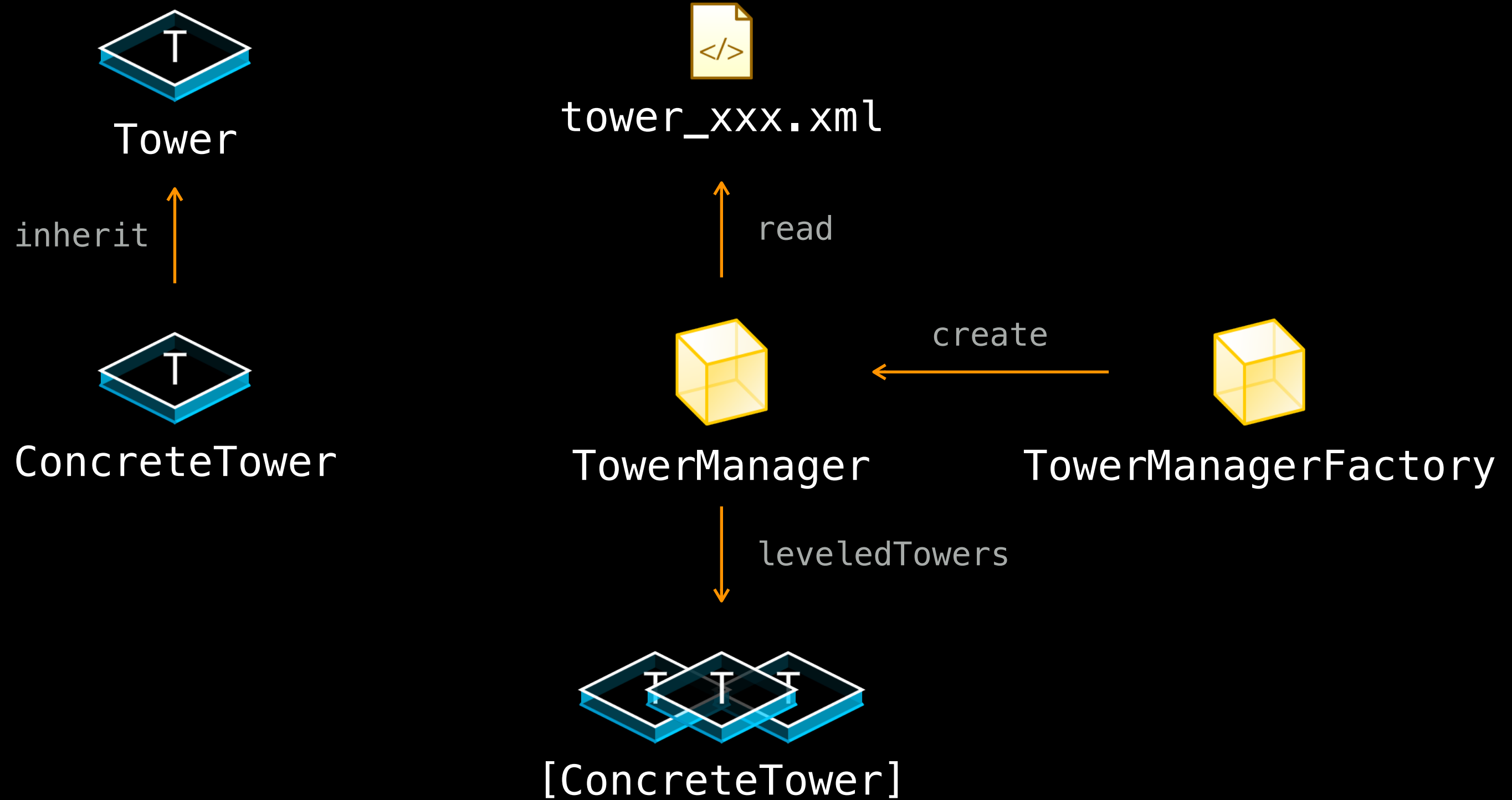
Other

Tower Management



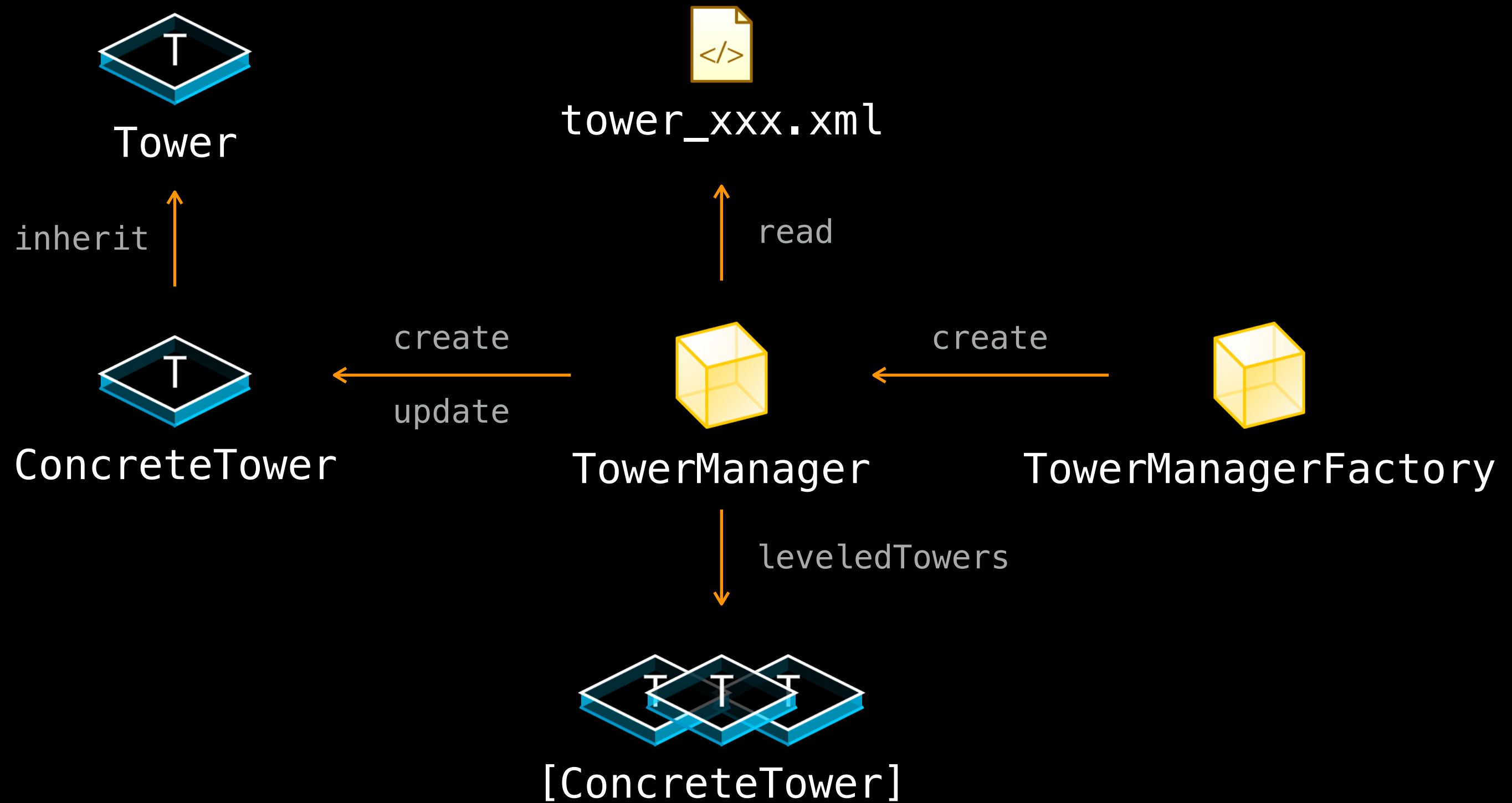
Other

Tower Management



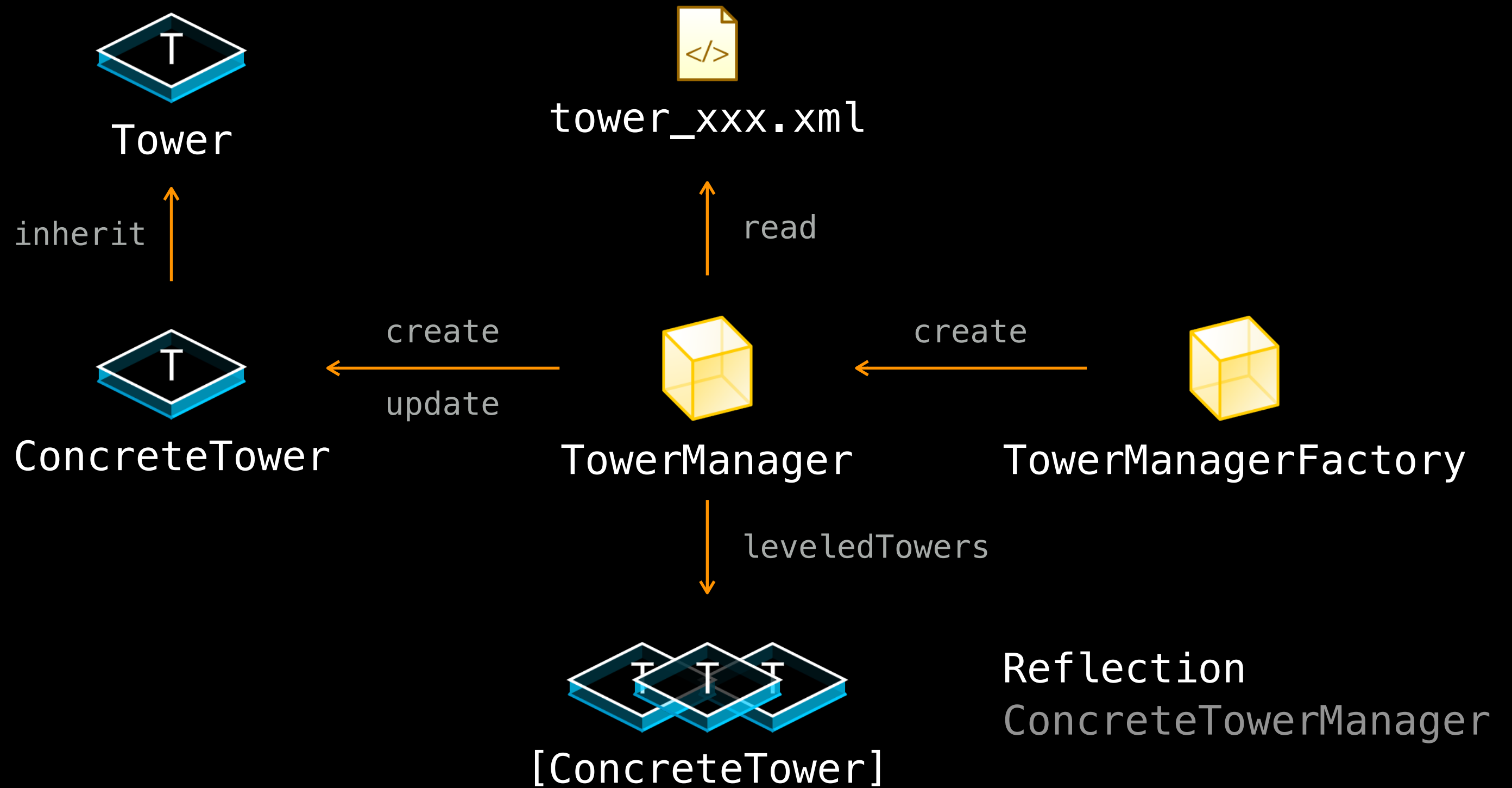
Other

Tower Management



Other

Tower Management



Demonstration

Team 10

Team 10

Code, Doc, Test Everyone

Zhao Zhe

Architecture Design

Play / GridMap / MapView

Sun Hai Yang

Tower Management

Tower File Reading

Mohammad Ali

Map Validation

Map File R & W

Jean Raymond Daher

GridView

EditingScene

Zhang Cheng Long

PlayingScene

Wang Meng Yao

View Flow

User Input Validation

Team 10

Artifacts

Required

GitHub

Documentation

Test Cases / Suites

Code Standard

Extra

Class Diagrams

UI Diagrams

Process Control Diagrams

Package Diagrams

Meeting Records

Issue & Milestones

More Tags