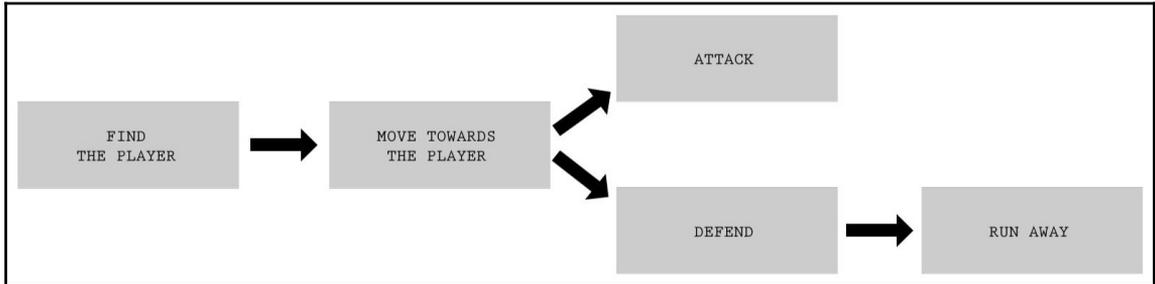
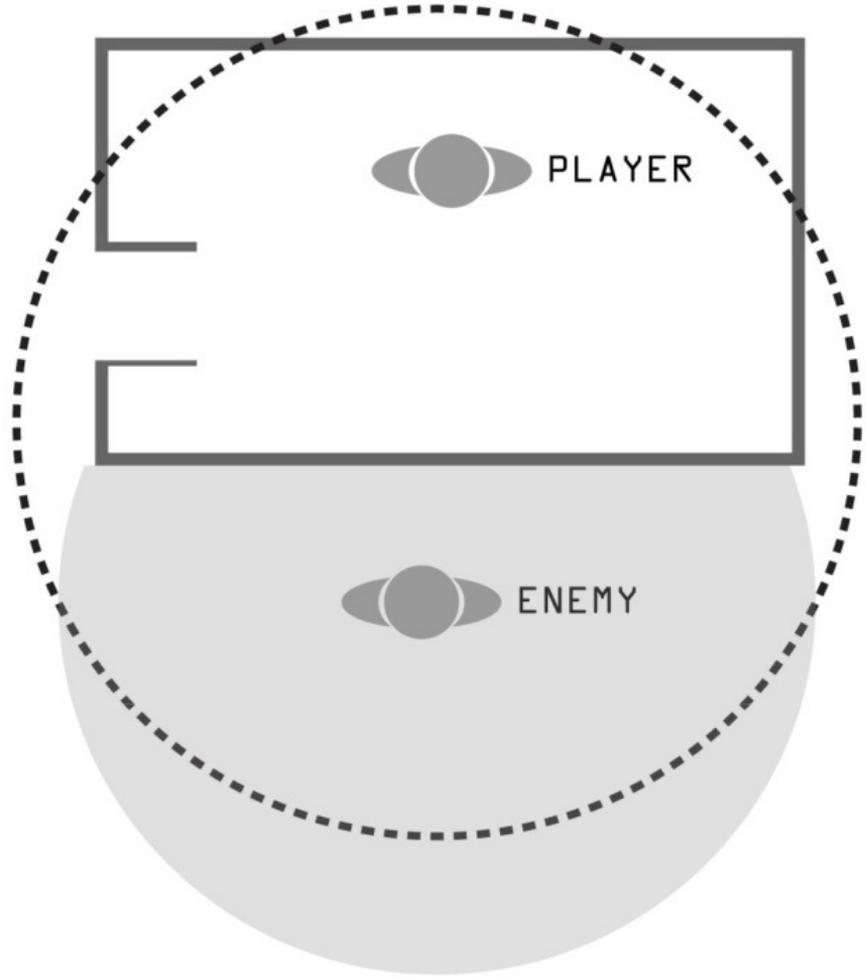


Chapter 1: Different Problems Require Different Solutions



--- Audio Awareness

● Visual Awareness



Chapter 2: Probability and Possibility Maps



If we saw the player first.



If the player saw us first.

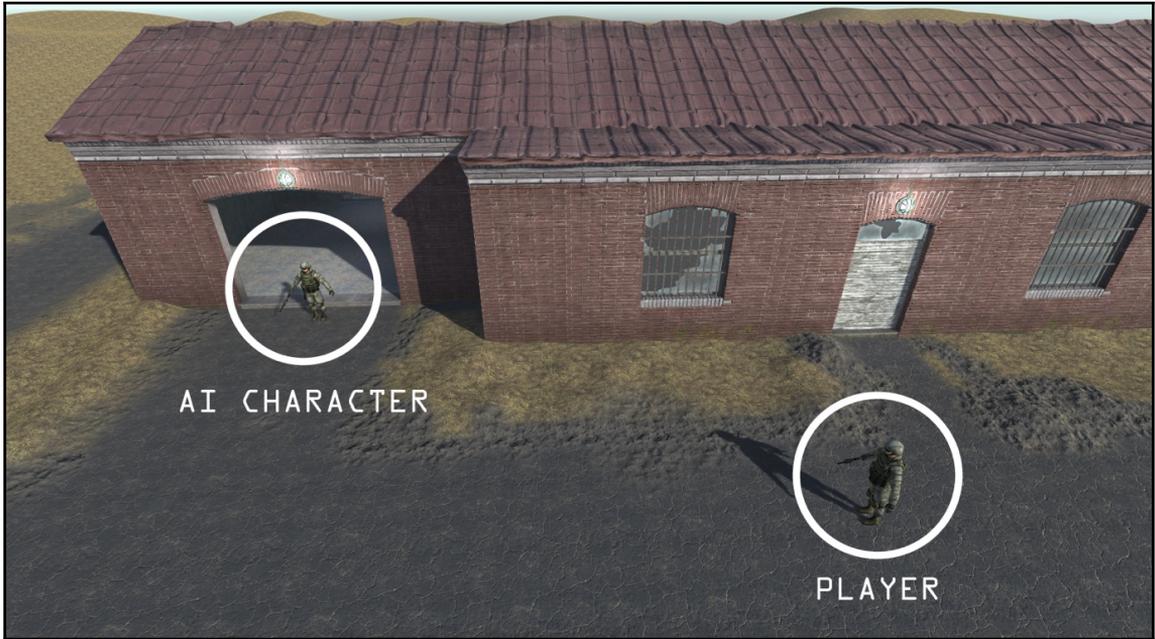


If i'm at low HP.



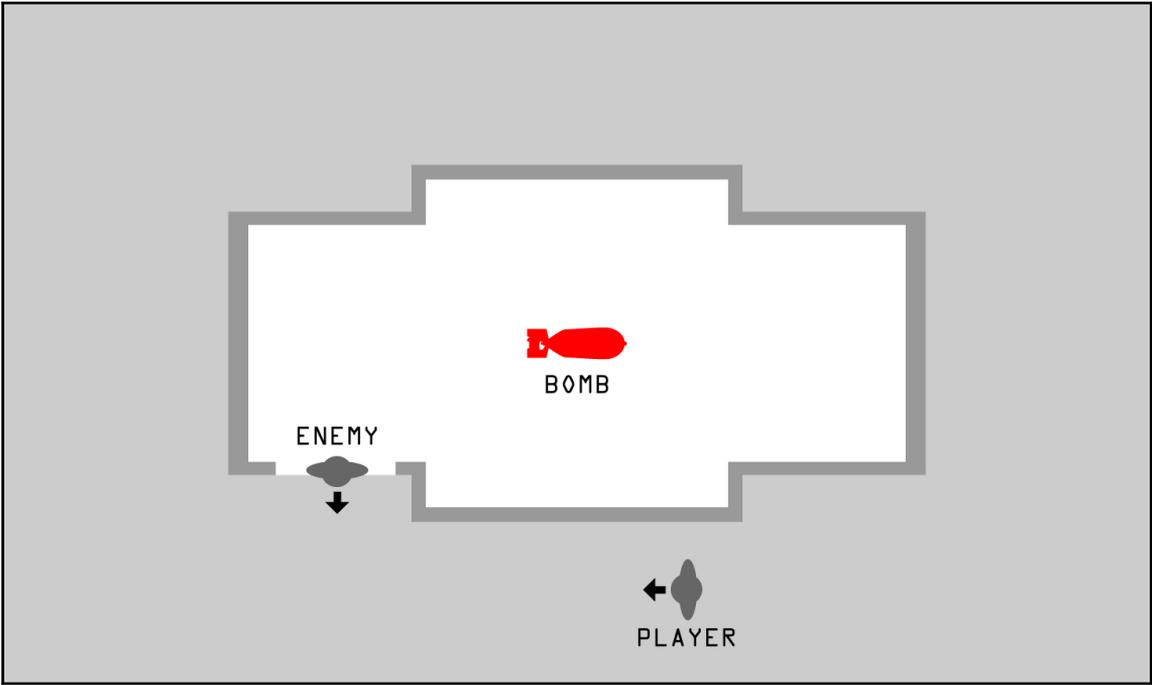
If Player is at low HP.

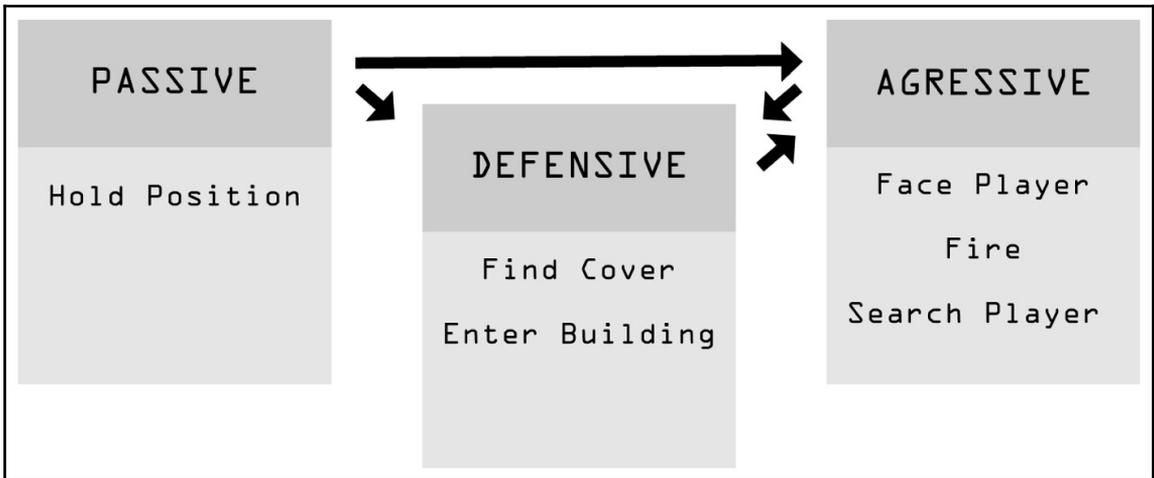
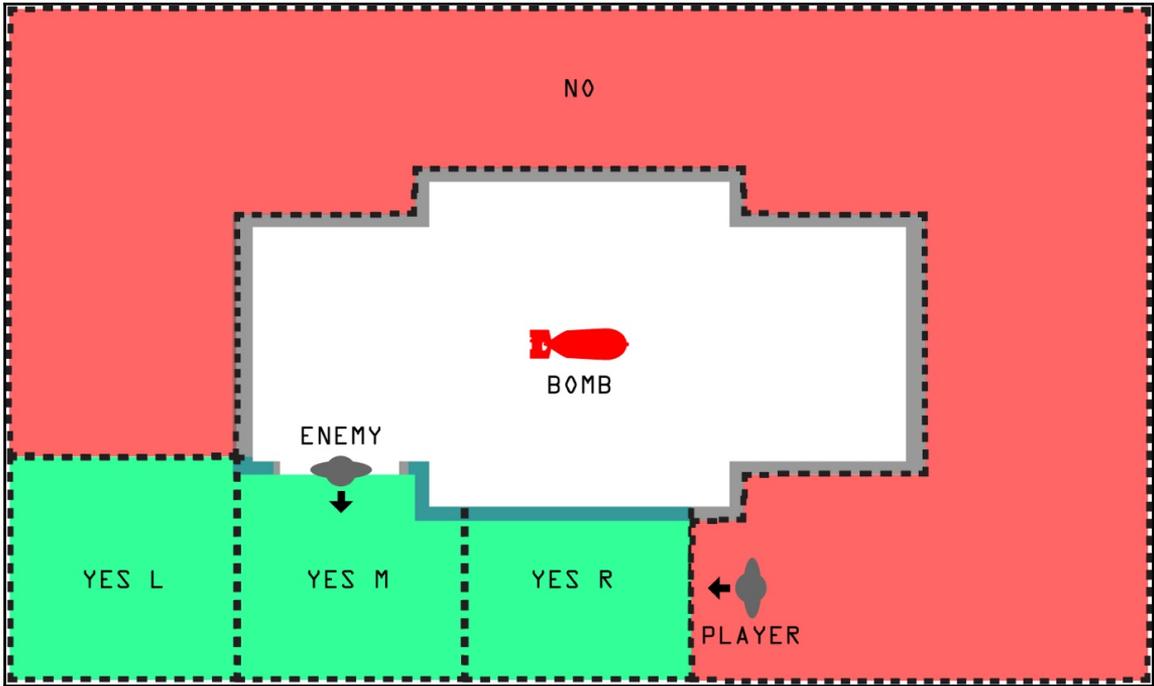




AI CHARACTER

PLAYER









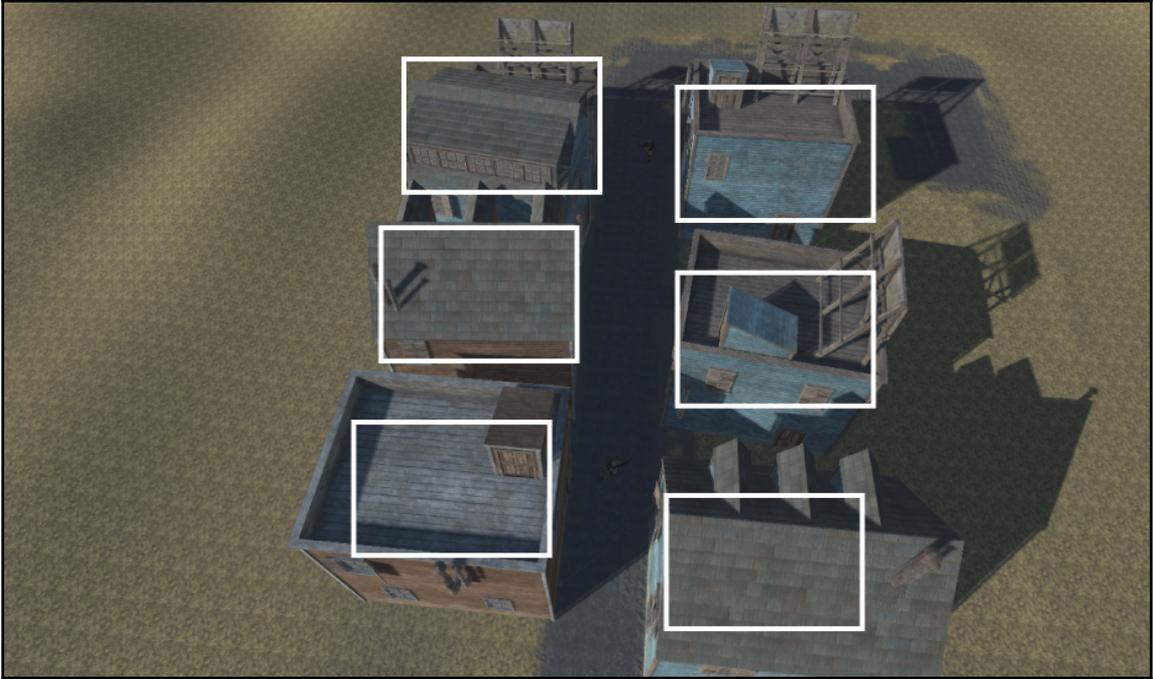
Time	Guard	Eat/Drink	Walk
Morning	0.87	0.1	0.03
Afternoon	0.48	0.32	0.2
Night	0.35	0.40	0.25



Chapter 3: Production Systems



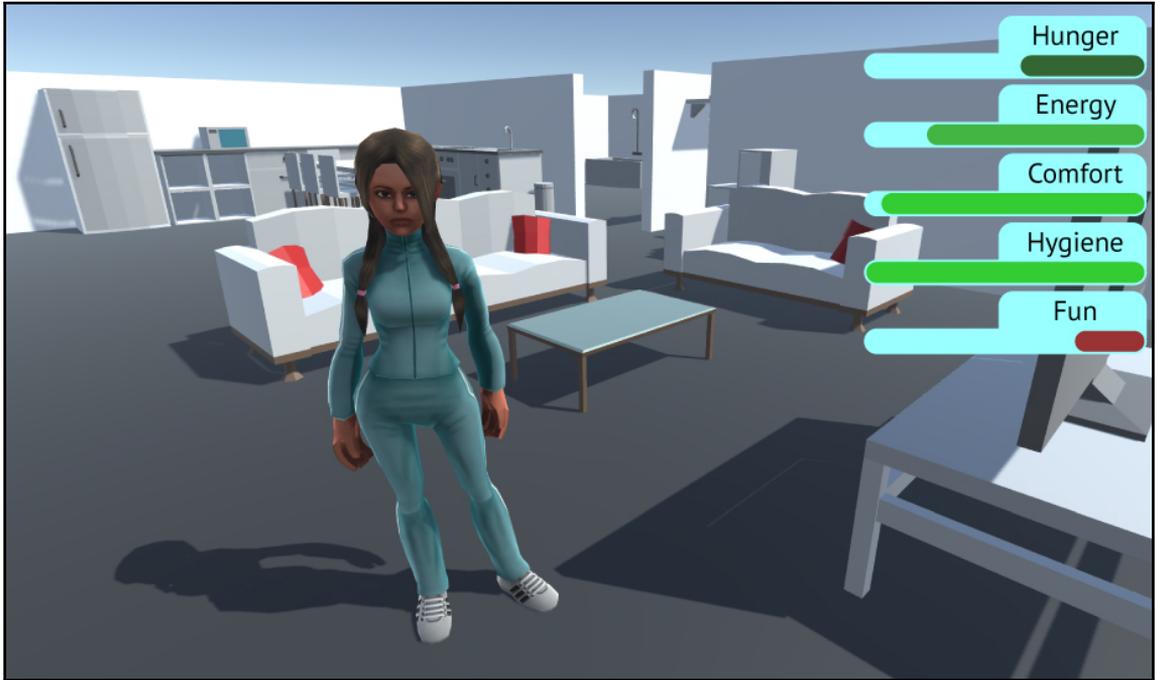




<p>>20HP DEFEAT PLAYER</p>		
<p><20HP SURVIVE</p>		

>20HP DEFEAT PLAYER	FIND PLAYER	
	FIND COVER	
<20HP SURVIVE	FIND POINTS	

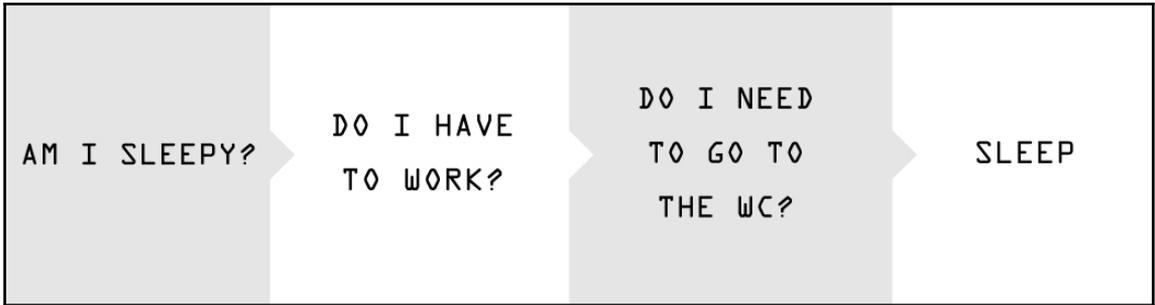
>20HP DEFEAT PLAYER	FIND PLAYER	MOVE TO
	FIND COVER	FIRE
<20HP SURVIVE	FIND POINTS	USE OBJECT
		CROUCH



HUNGER
ENERGY
COMFORT
HYGIENE
FUN

GO TO
INTERACT WITH



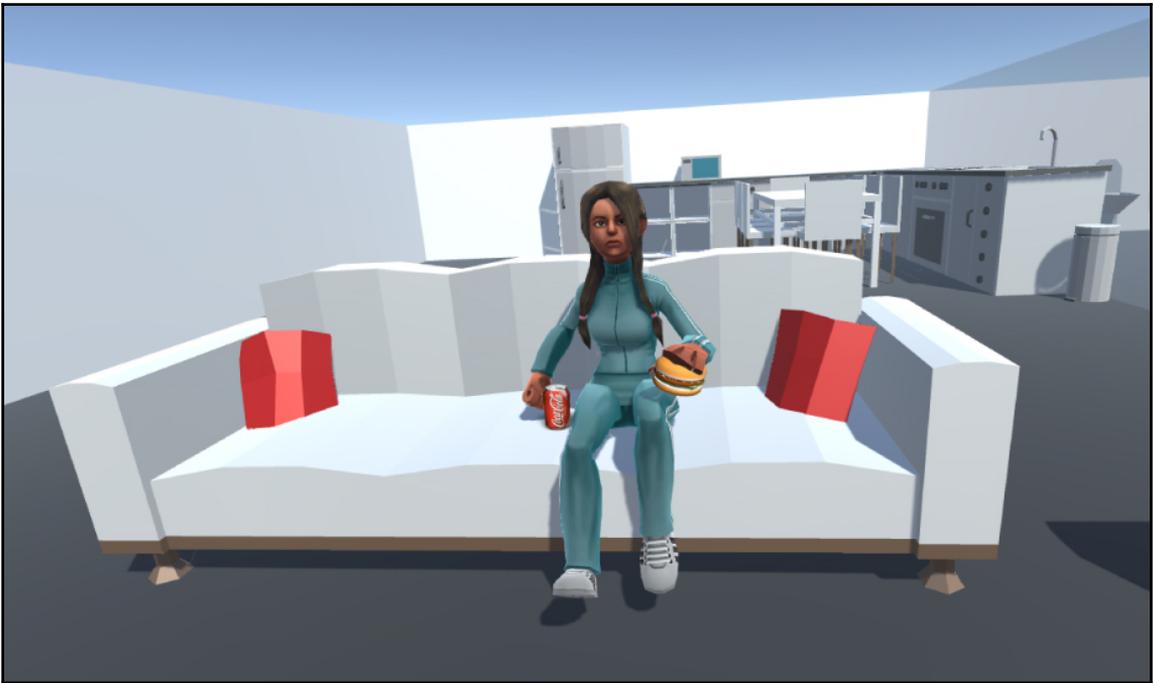


AM I
UNCOMFORTABLE?

AM I DOING
OTHER THINGS?

CAN I SEAT
NOW?

SEAT

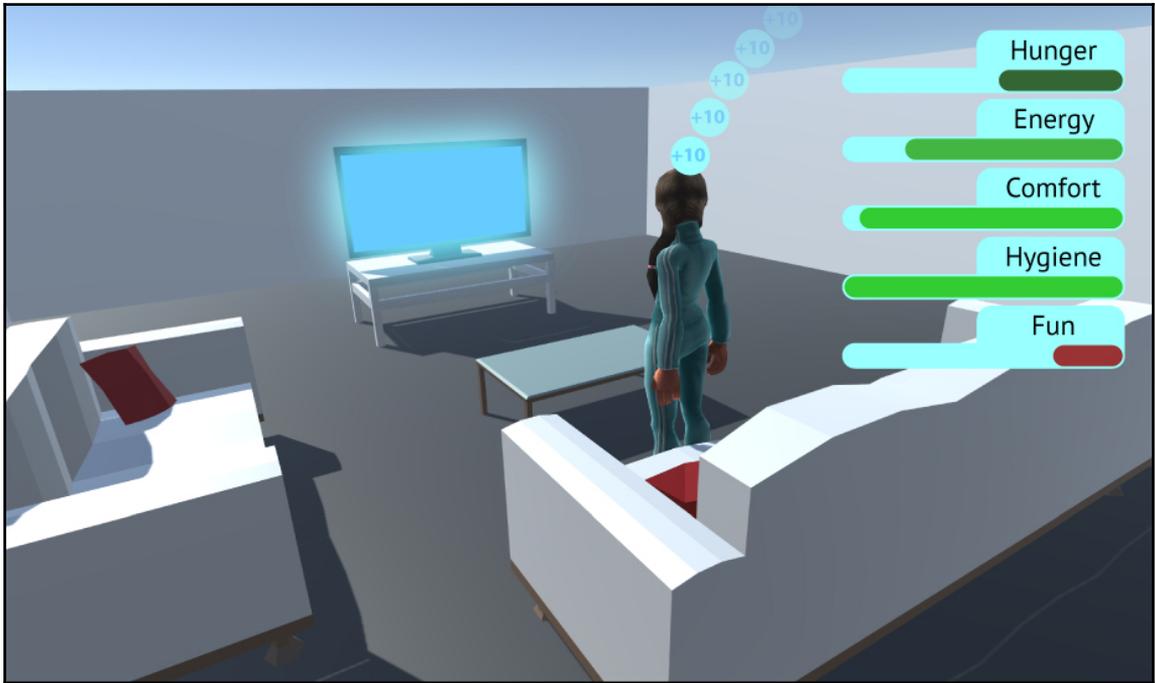


DO I NEED
A SHOWER?

AM I DOING
OTHER THINGS?

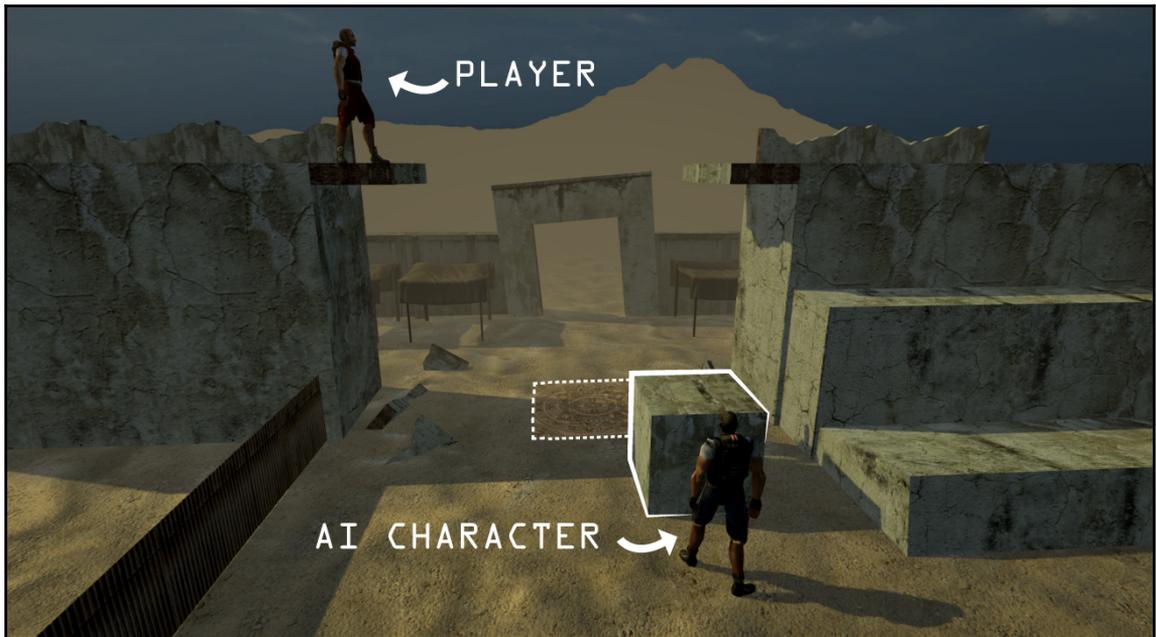
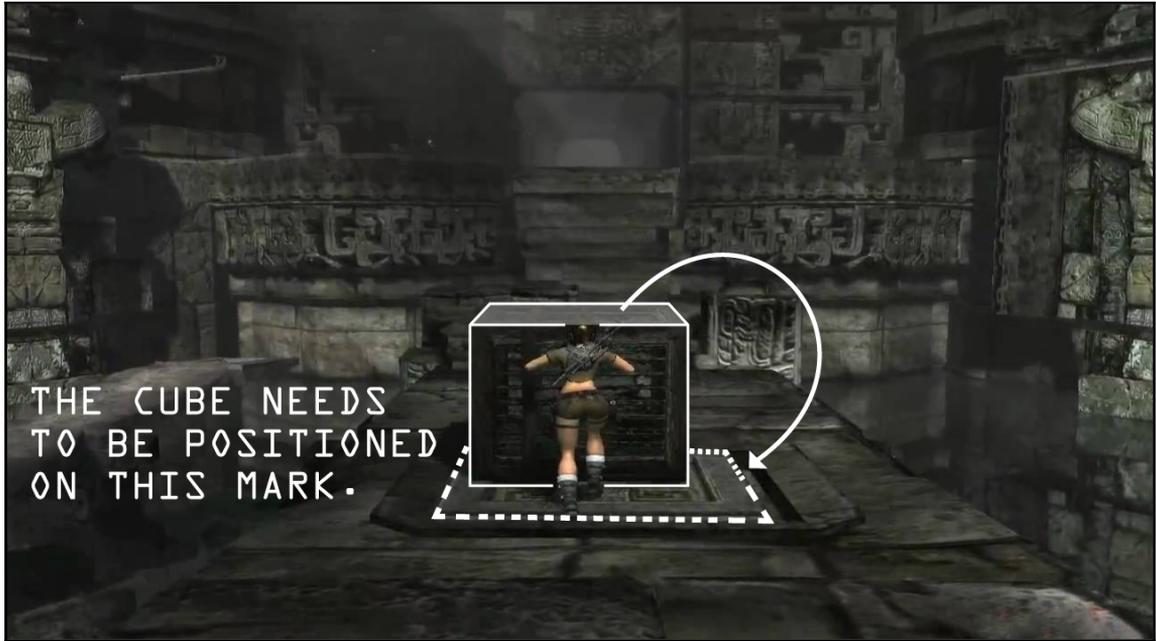
TAKE
SHOWER

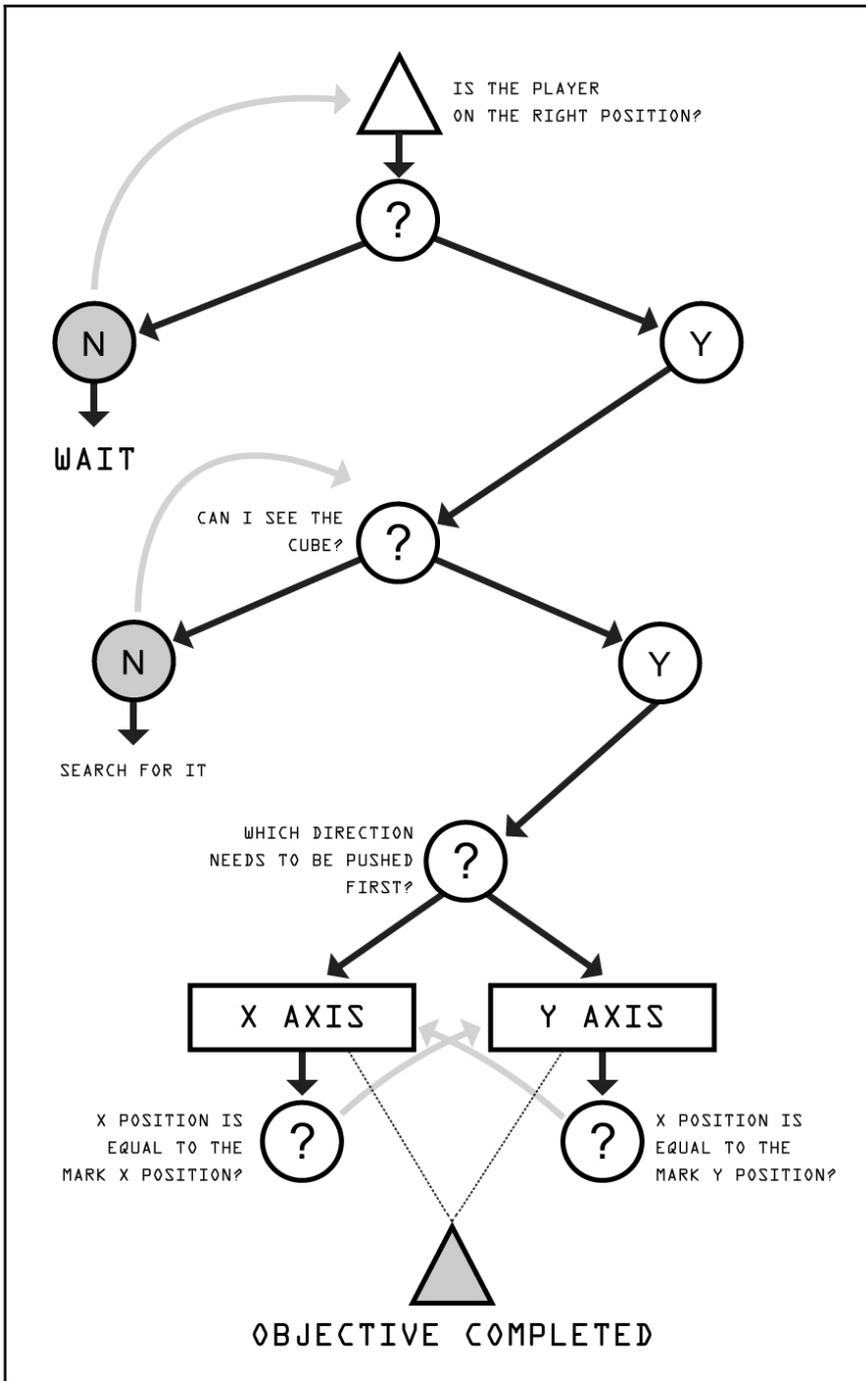


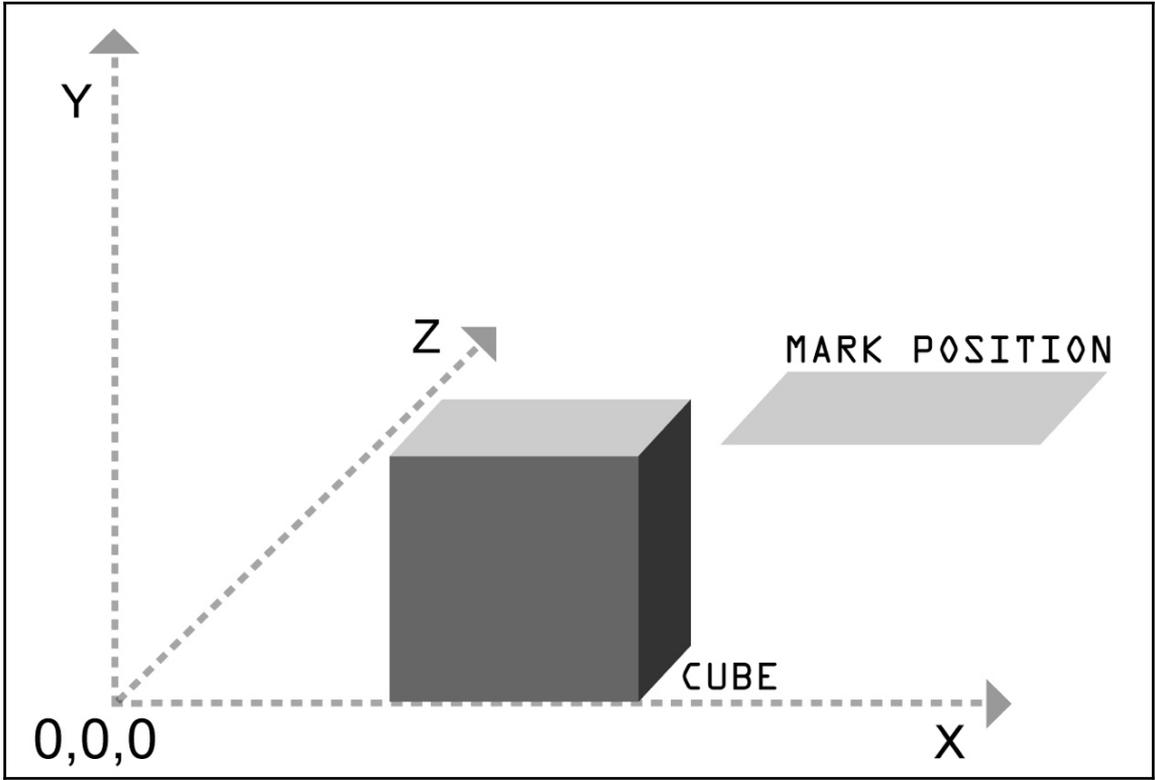


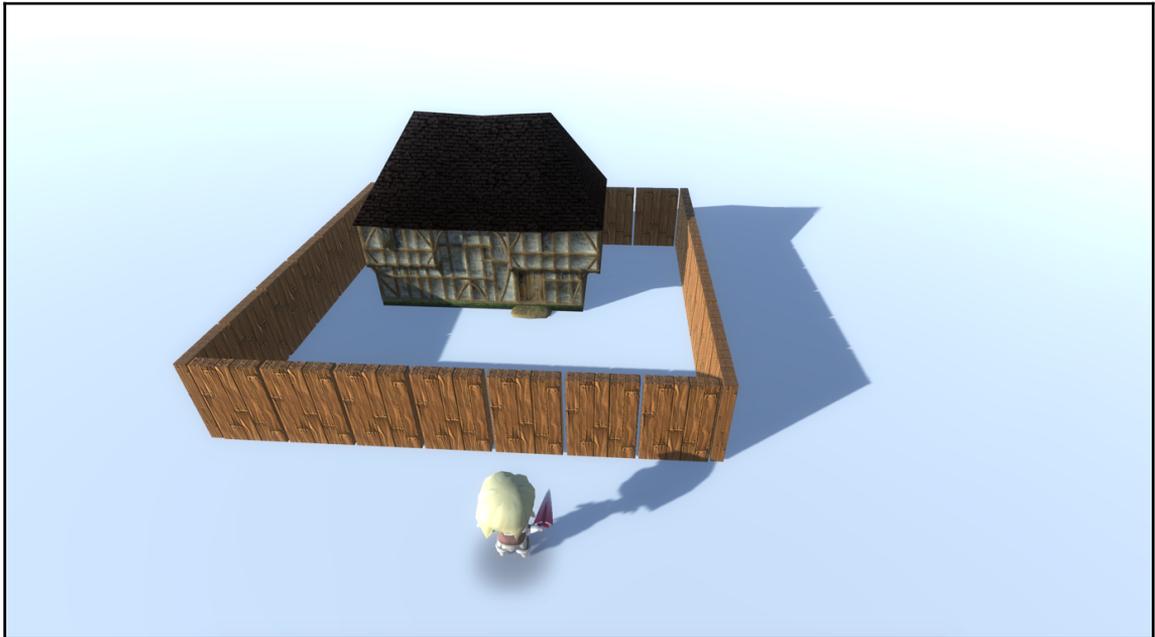
Chapter 4: Environment and AI

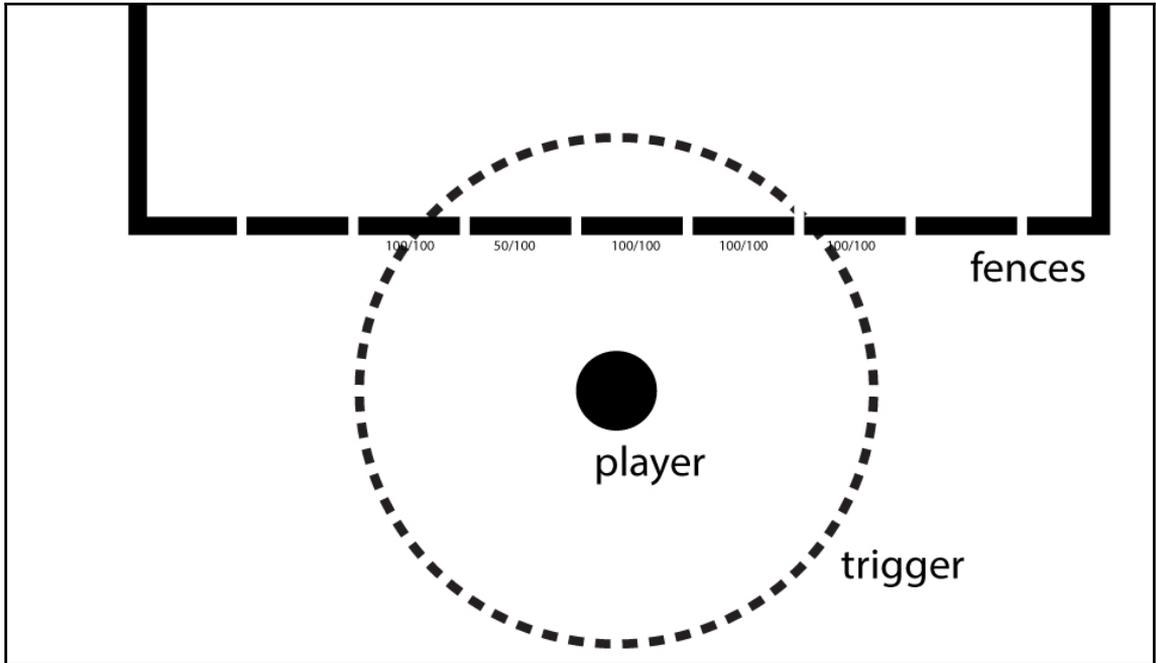




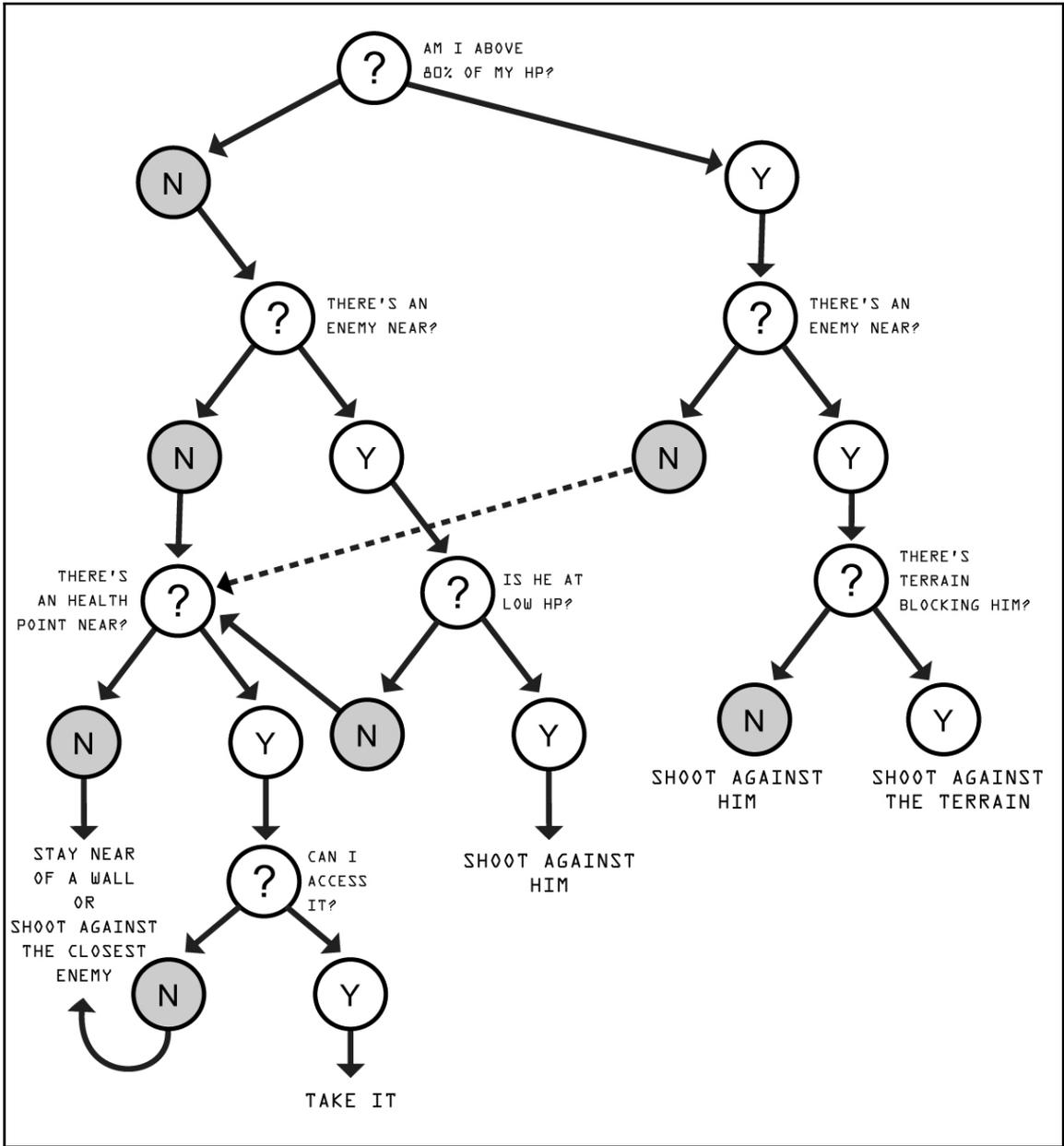










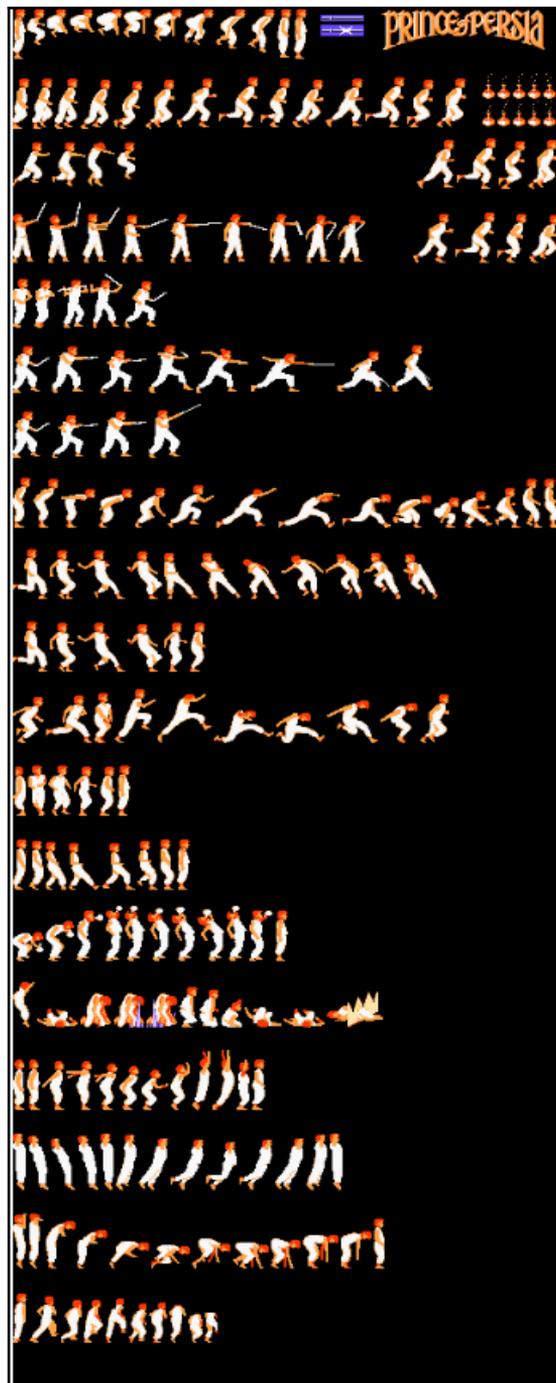


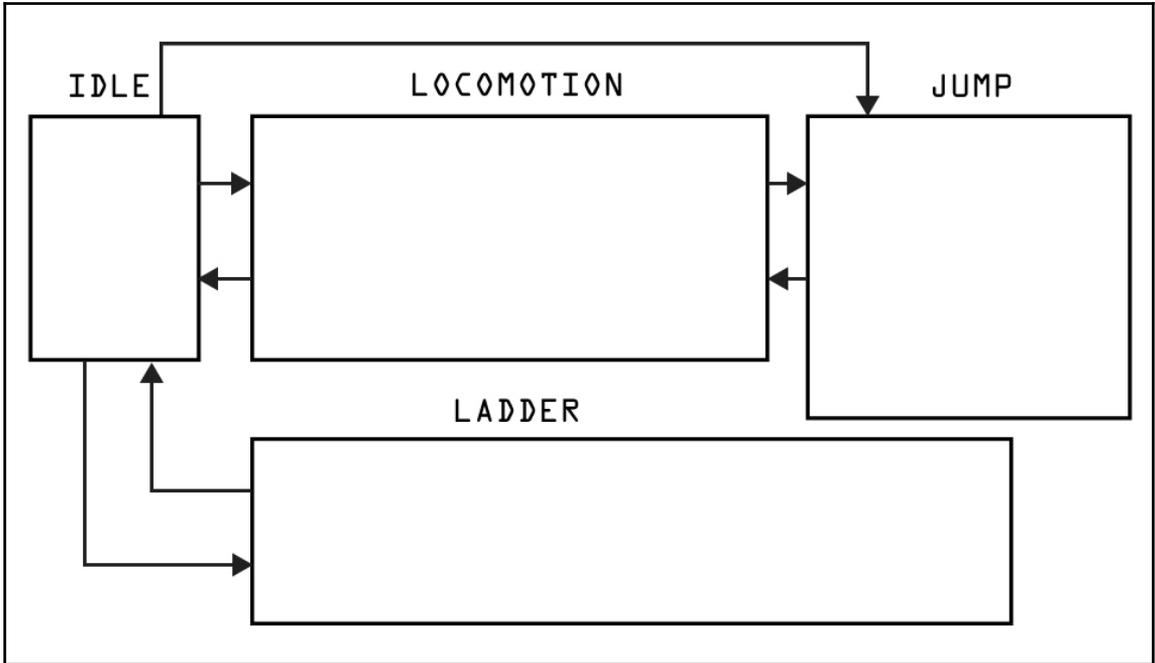
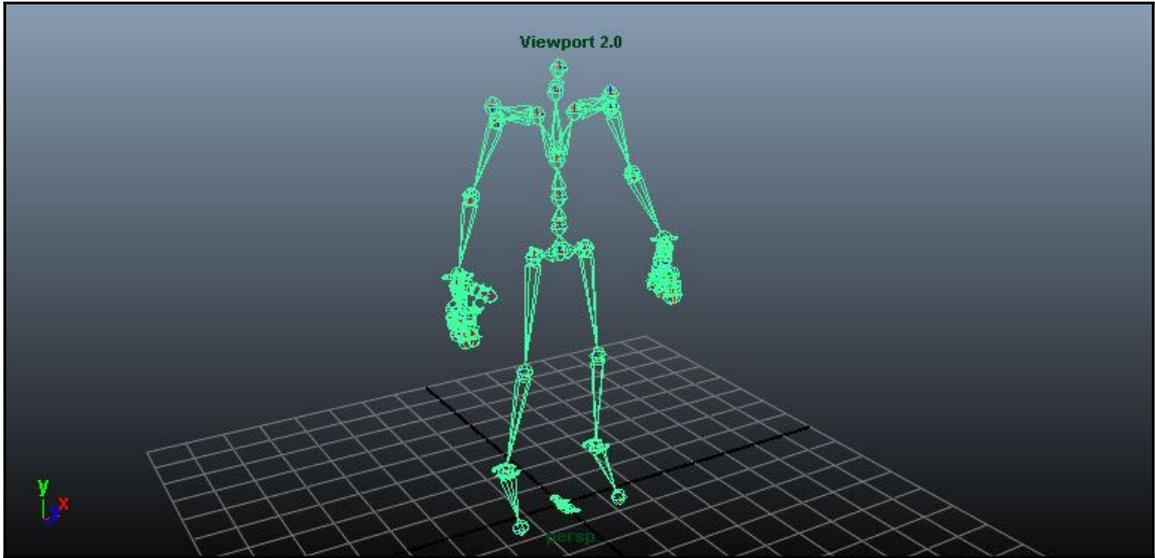


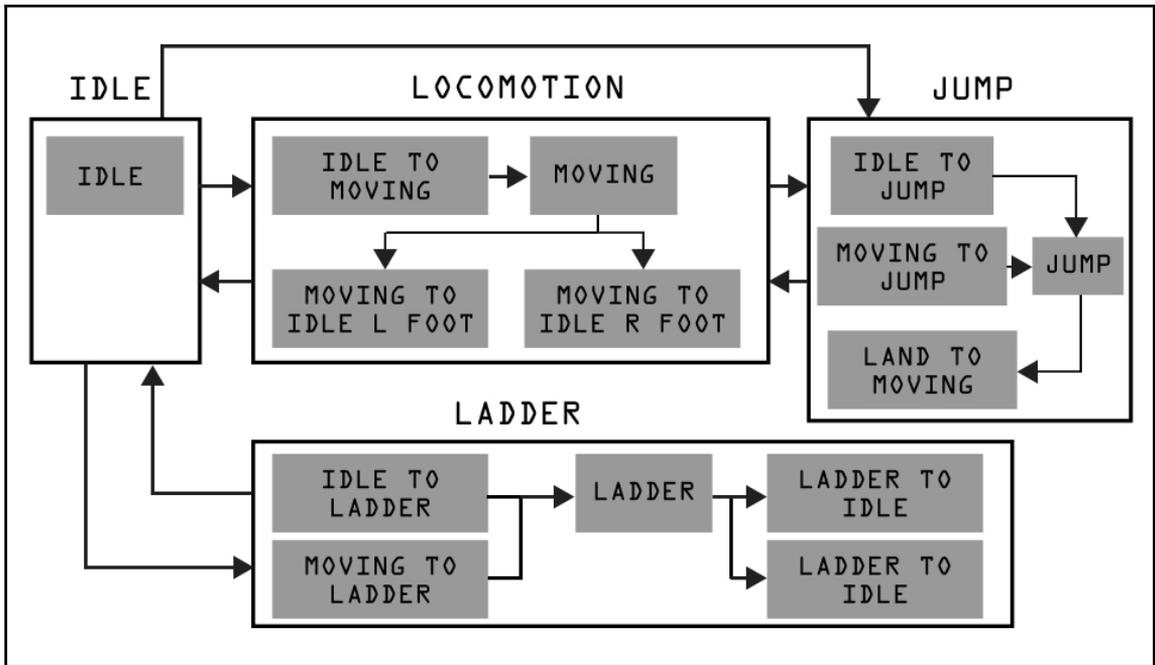


Chapter 5: Animation Behaviors



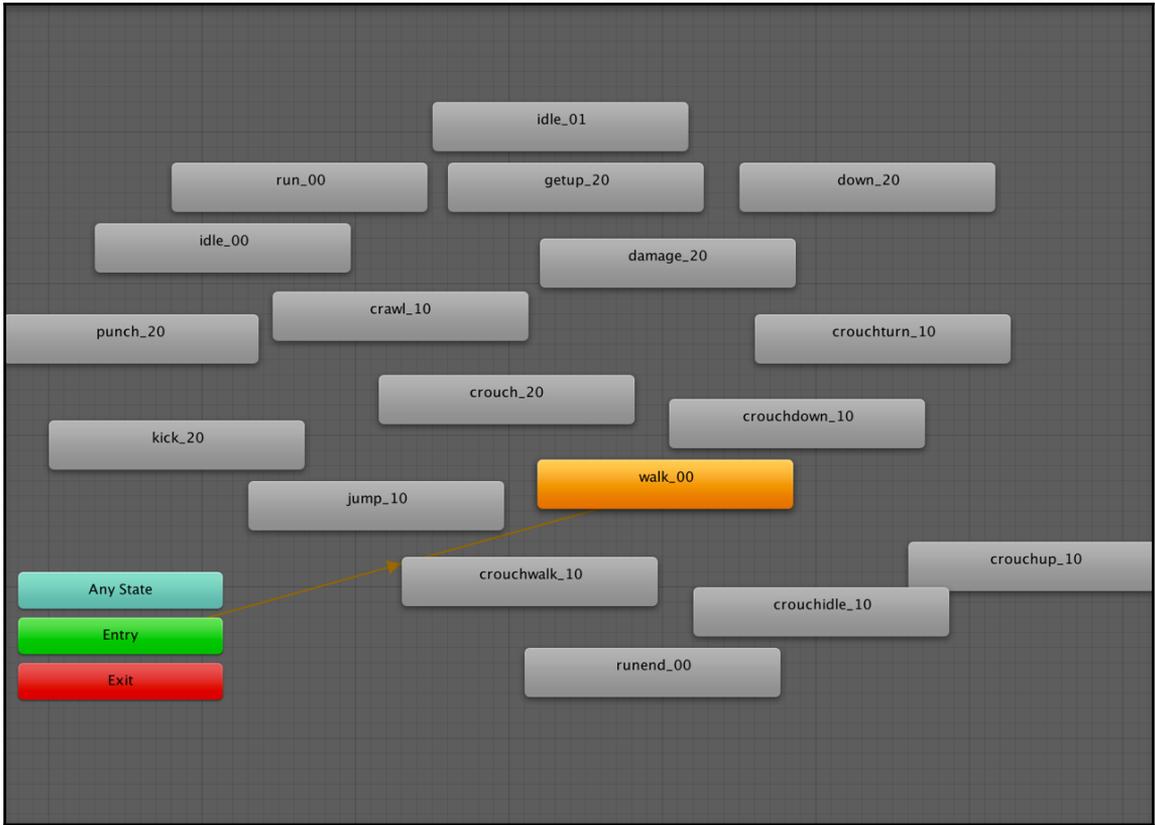


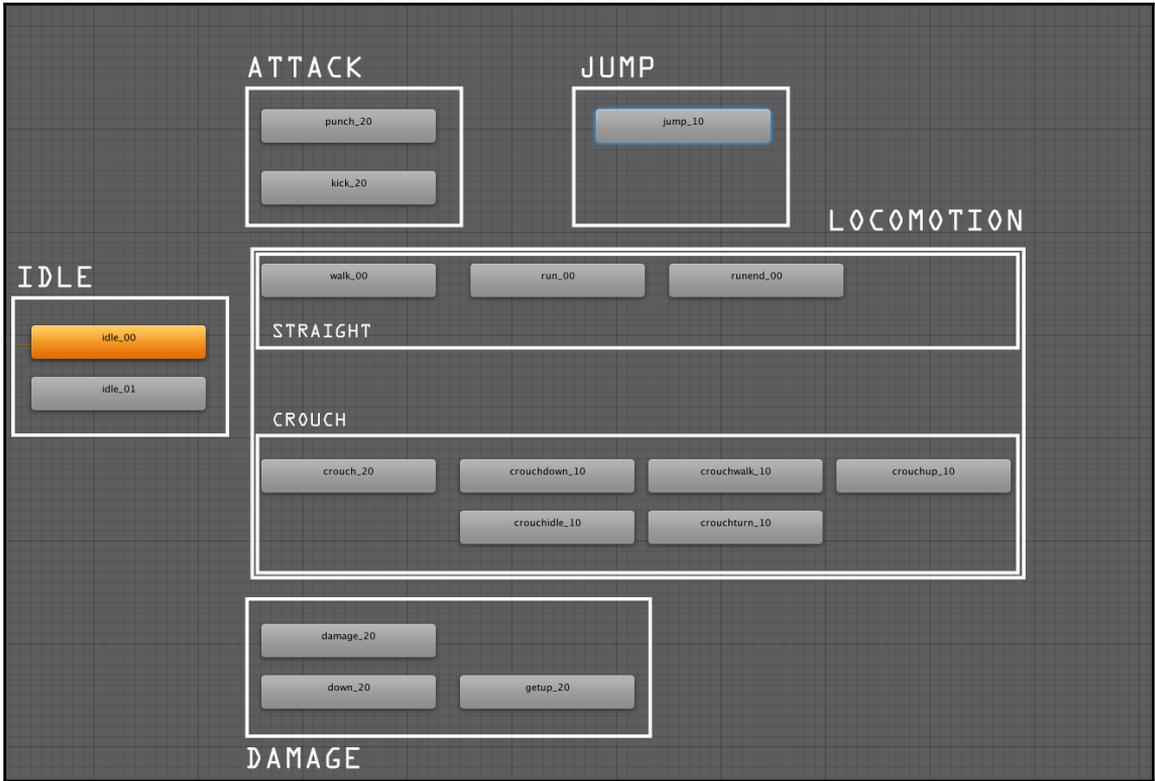


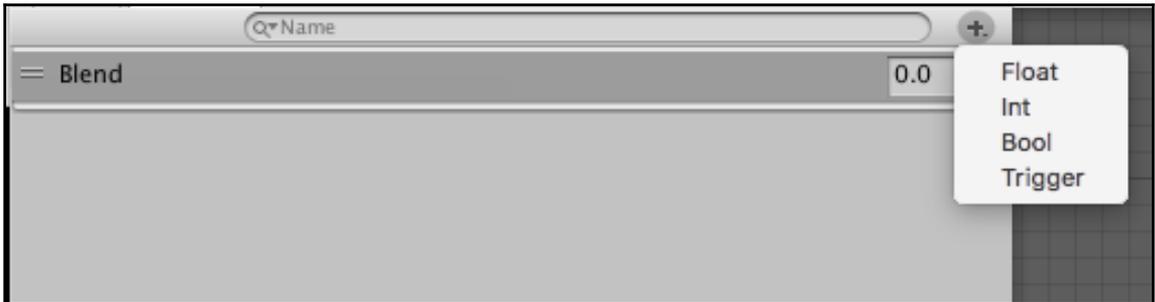
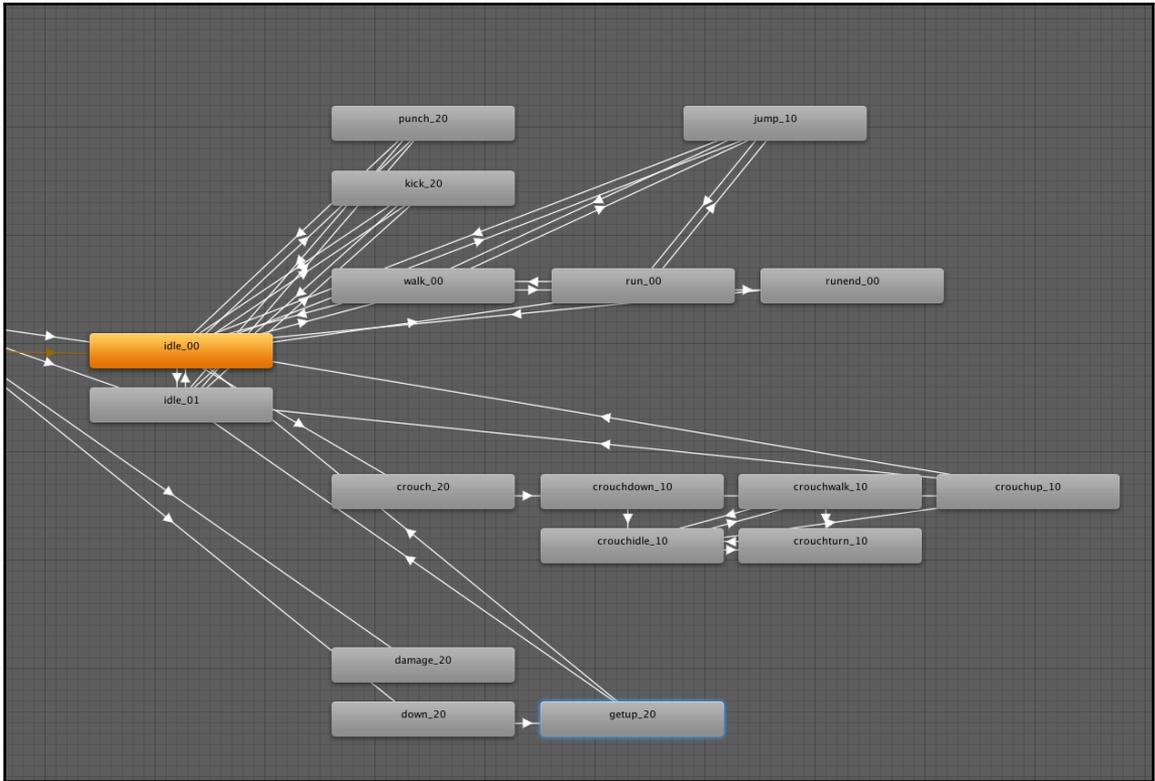


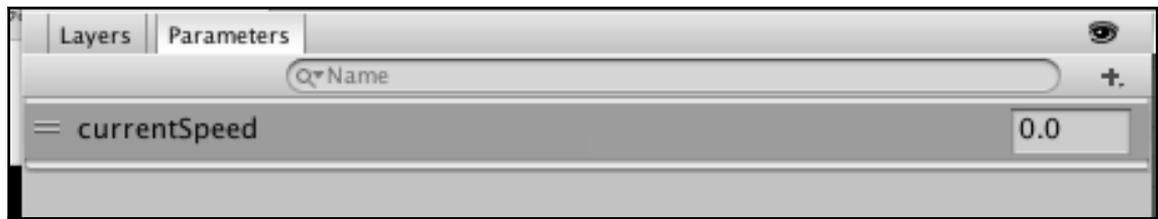


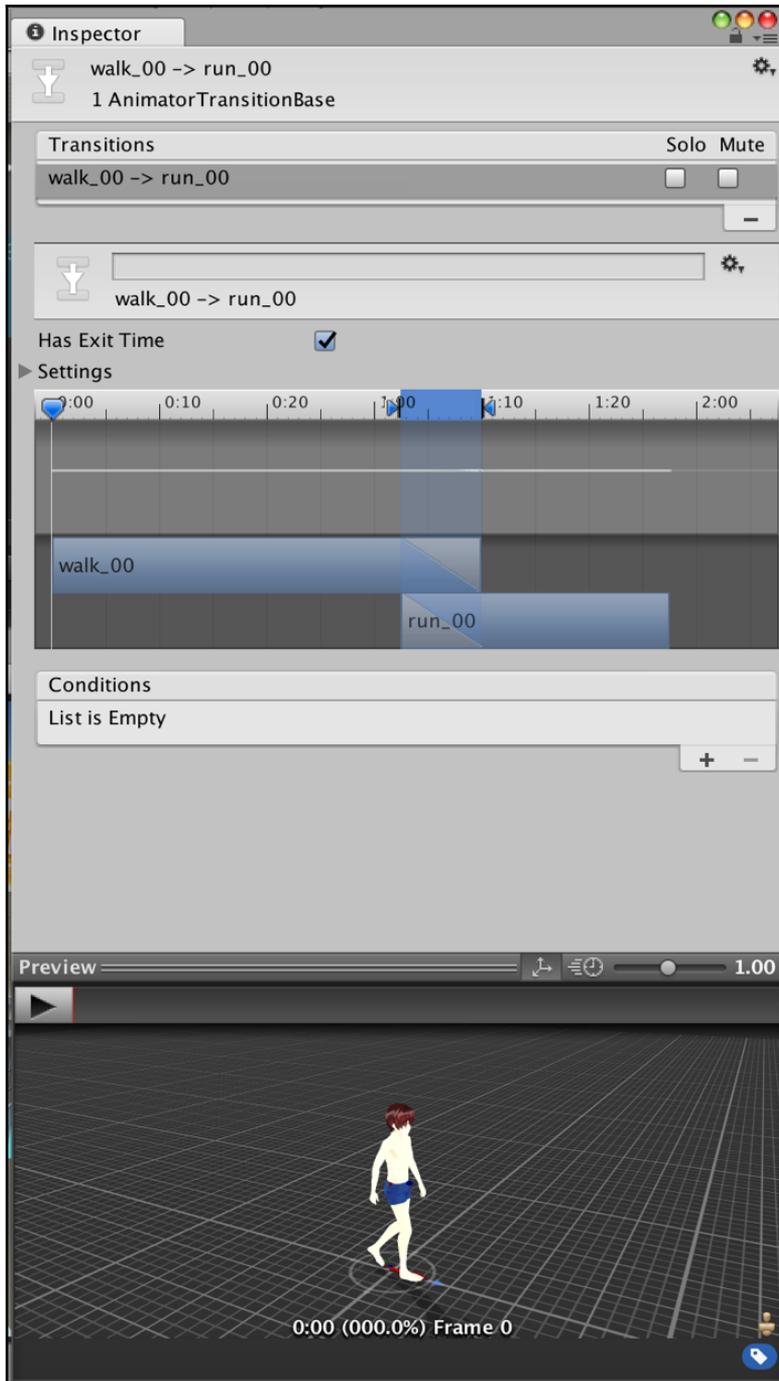
Folder	
C# Script Javascript Editor Test C# Script Shader ▶	
Scene Prefab	
Audio Mixer	Create ▶
Material Lens Flare Render Texture Lightmap Parameters	Reveal in Finder Open Delete
Sprites ▶	Open Scene Additive
Animator Controller	Import New Asset... Import Package ▶ Export Package... Find References in Scene Select Dependencies
Animation Animator Override Controller Avatar Mask	Refresh ⇧R Reimport
Physic Material Physics2D Material	Reimport All
GUI Skin Custom Font	Run API Updater...
Legacy ▶	Open C# Project











Inspector

idle_00

Tag

Motion idle_00

Speed 1

Multiplier Parameter

Mirror Parameter

Cycle Offset 0 Parameter

Foot IK

Write Defaults

Transitions	Solo	Mute
idle_00 -> idle_01	<input type="checkbox"/>	<input type="checkbox"/>
idle_00 -> punch_20	<input type="checkbox"/>	<input type="checkbox"/>
idle_00 -> kick_20	<input type="checkbox"/>	<input type="checkbox"/>
idle_00 -> walk_00	<input type="checkbox"/>	<input type="checkbox"/>
idle_00 -> run_00	<input type="checkbox"/>	<input type="checkbox"/>
idle_00 -> jump_10	<input type="checkbox"/>	<input type="checkbox"/>
idle_00 -> crouch_20	<input type="checkbox"/>	<input type="checkbox"/>

idle_00 -> run_00

Has Exit Time

Settings

0:00 5:00 10:00

idle_00

Conditions

List is Empty

+ -

Add Behaviour

idle_00

idle_00 -> walk_00

Has Exit Time

Settings

Timeline labels: 0:00, 5:00, 10:00, 15:00

Timeline states: idle_00, walk_00

Conditions

= currentSpeed Greater 0

+ -

Detailed description: The image shows a software interface for configuring a state machine. At the top, a title bar displays the transition 'idle_00 -> walk_00' with a gear icon on the right. Below this, a checkbox labeled 'Has Exit Time' is checked. A 'Settings' section contains a horizontal timeline with markers at 0:00, 5:00, 10:00, and 15:00. A blue vertical bar is positioned at approximately 12:00, and a blue horizontal bar highlights the 'idle_00' state from 0:00 to 12:00. Below the timeline, a 'Conditions' section features a dropdown menu set to 'currentSpeed', a comparison operator 'Greater', and a text input field containing '0'. At the bottom right of the conditions section are '+' and '-' buttons.

Settings

0:00 5:00 10:00 15:00

idle_00 idle_00

walk_00

Conditions

= currentSpeed Greater 0.1

+ -

Add Behaviour

Settings

idle_00

walk_00

Conditions

=	currentSpeed	Greater	0.1
=	currentSpeed	Less	4.9

+ -

The image shows a screenshot of a game engine's interface. At the top is a timeline with markers at -90:00, -60:00, -30:00, and 00:00. A blue playhead is positioned at 00:00. Below the timeline is a dark grey area containing a blue box labeled "idle_00". Below this is a "Conditions" panel with a dropdown menu set to "currentSpeed", a comparison operator set to "Less", and a numerical input field containing "0.1". There are also "+" and "-" buttons to the right of the input field.



Animator

Layers | Parameters

Q Name +

- currentSpeed 0.0
- steppingGrass

Settings

0:00 5:00 10:00 15:00

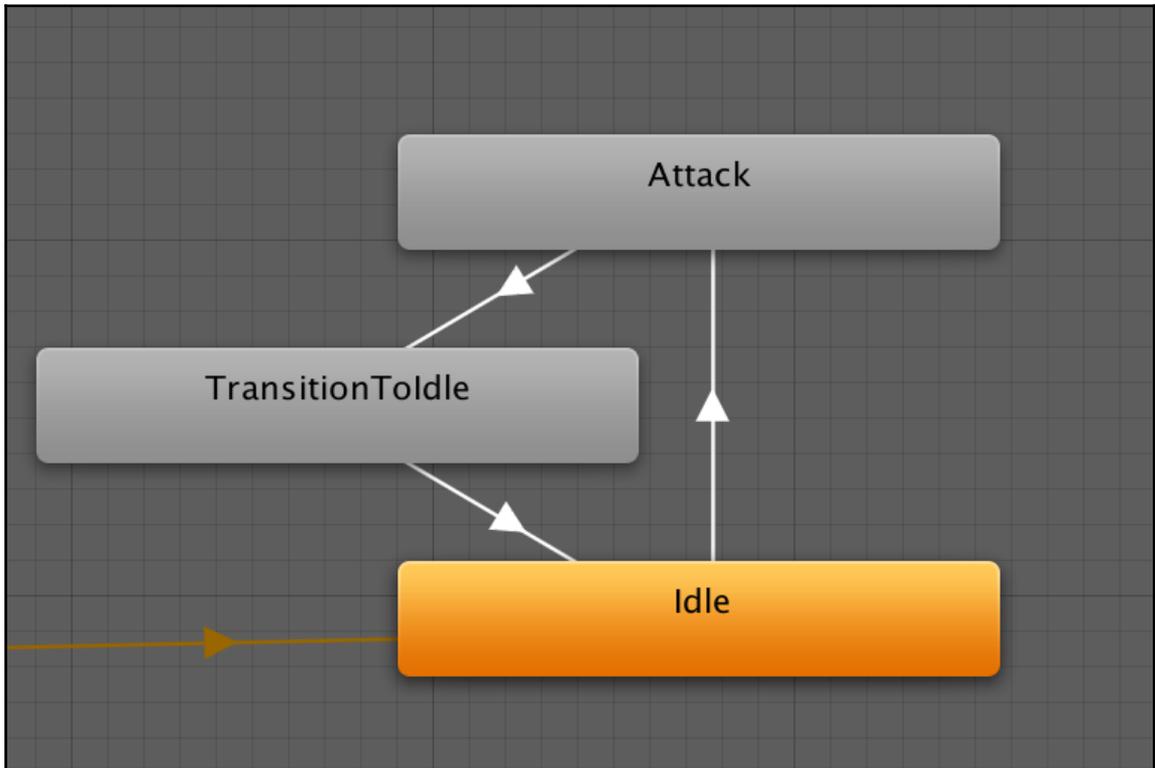
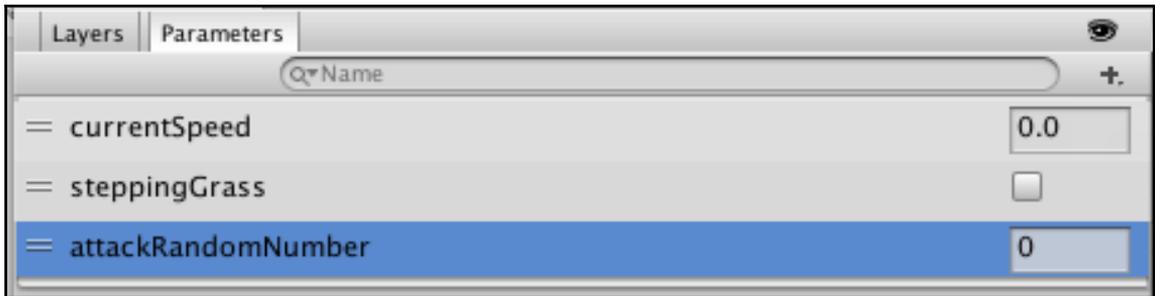
idle_00

crouc

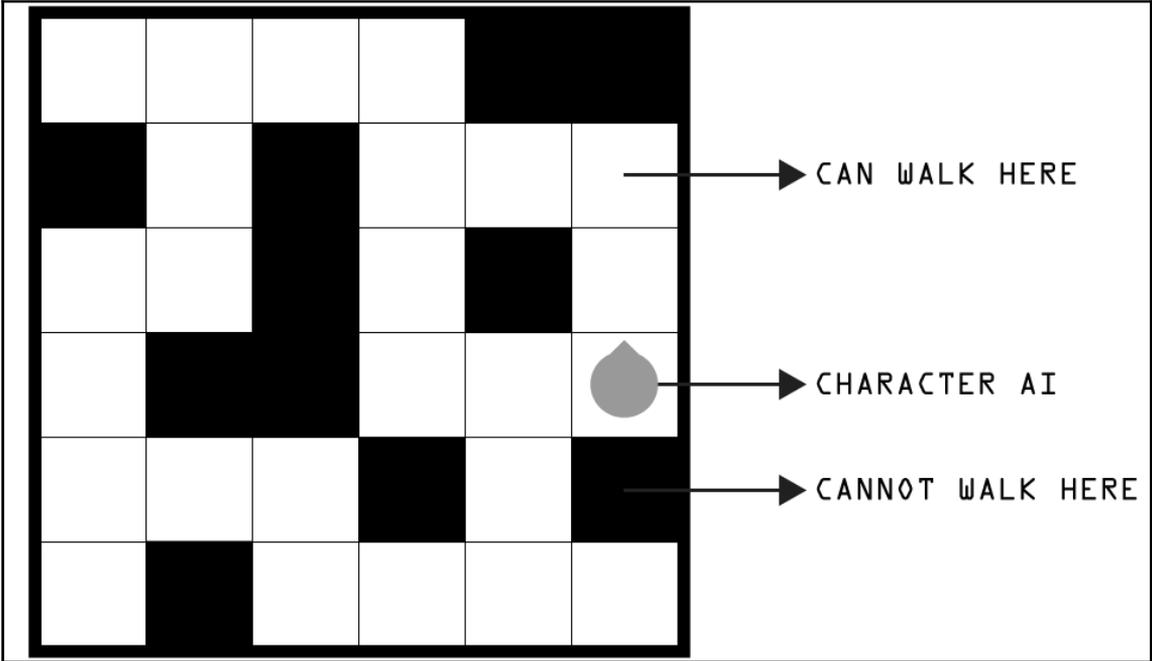
Conditions

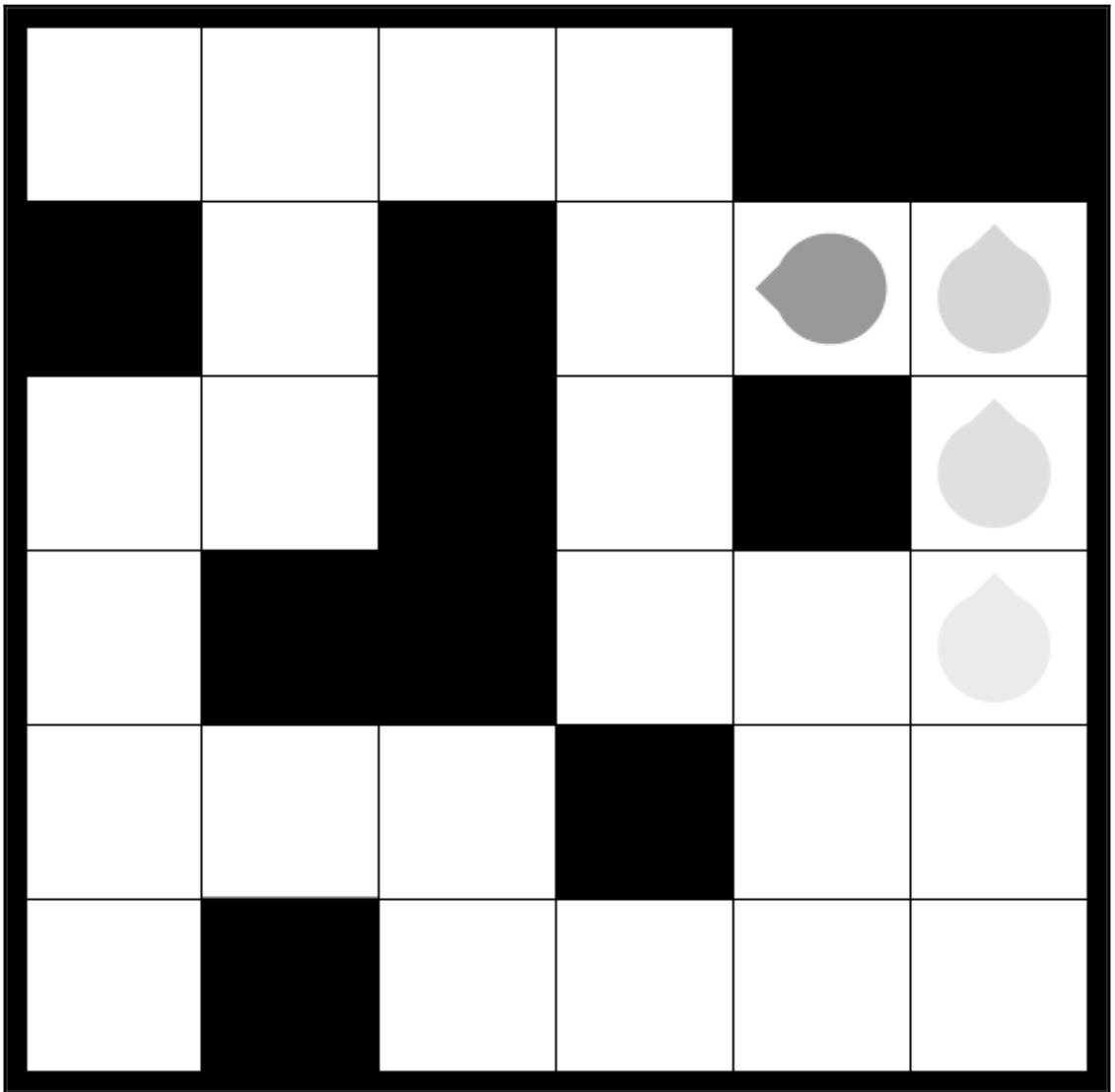
- currentSpeed Less 0.1
- steppingGrass true

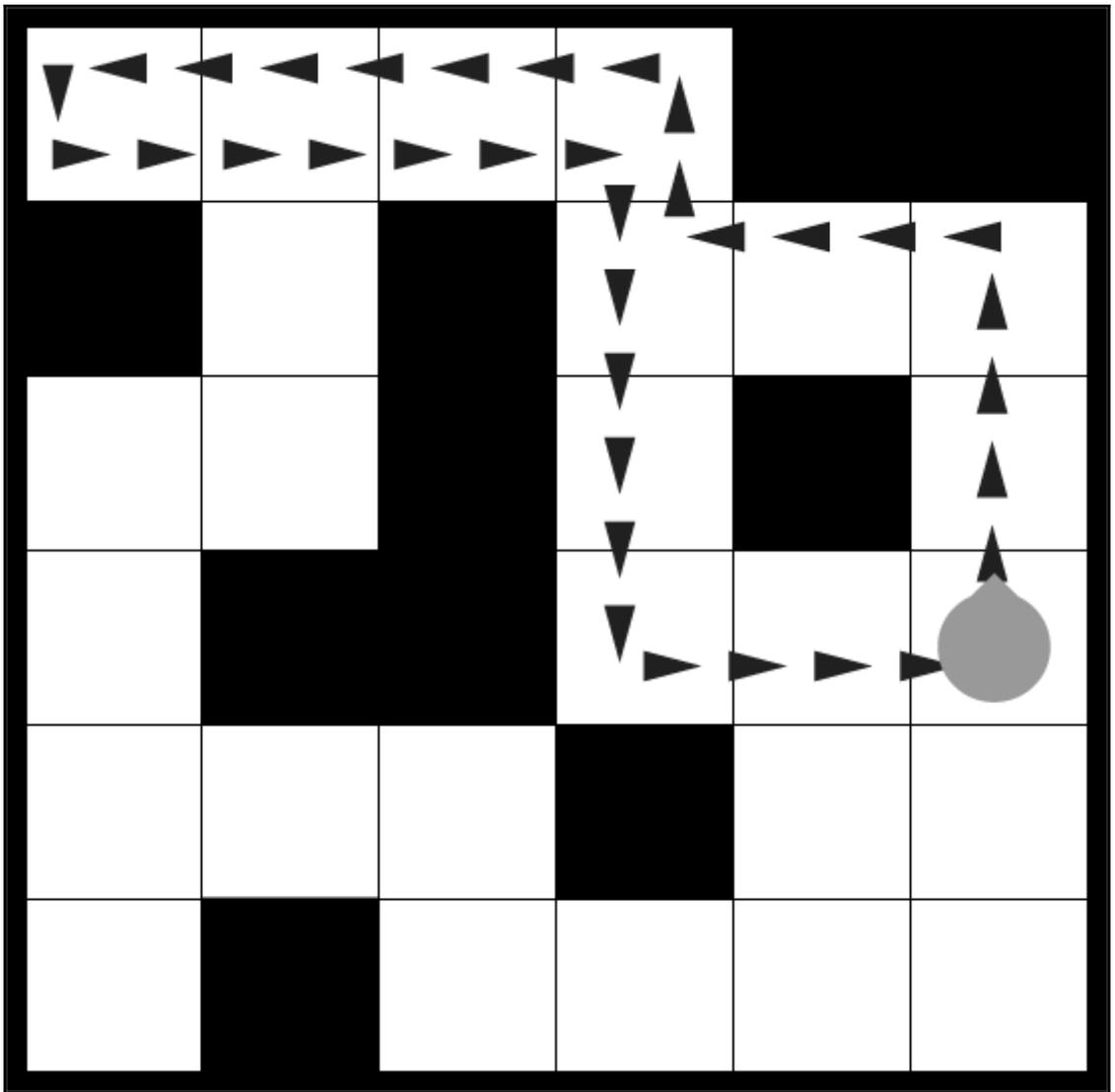
+ -

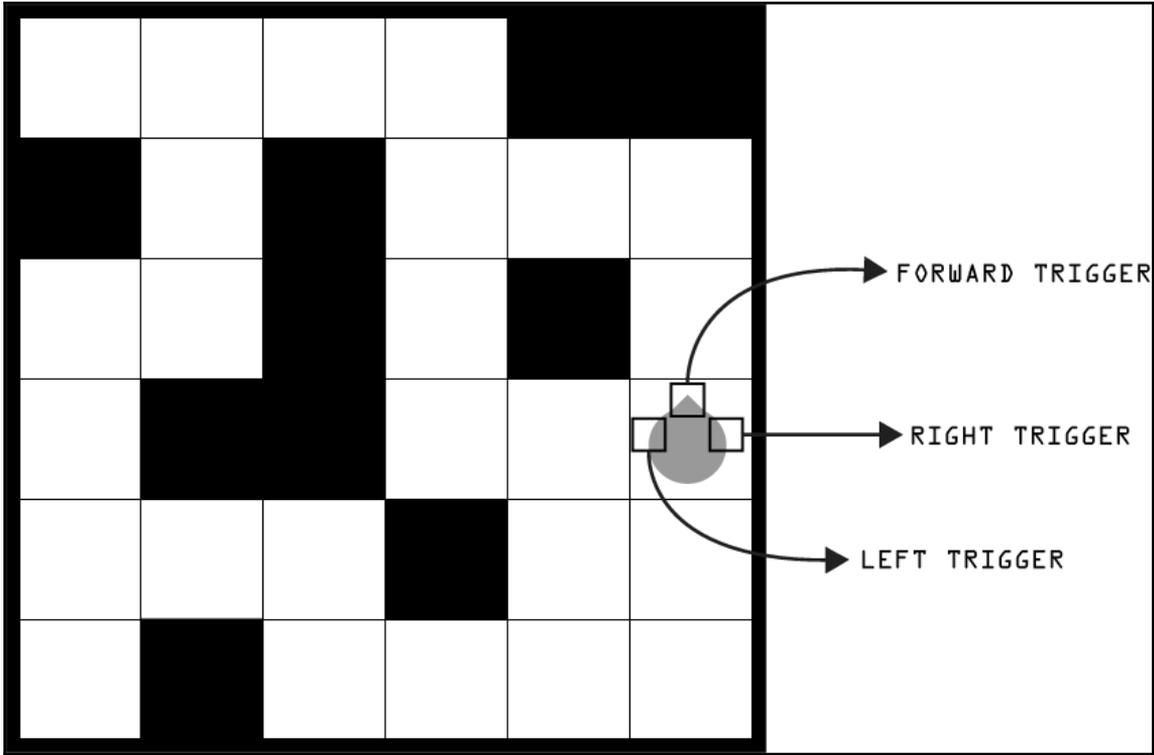


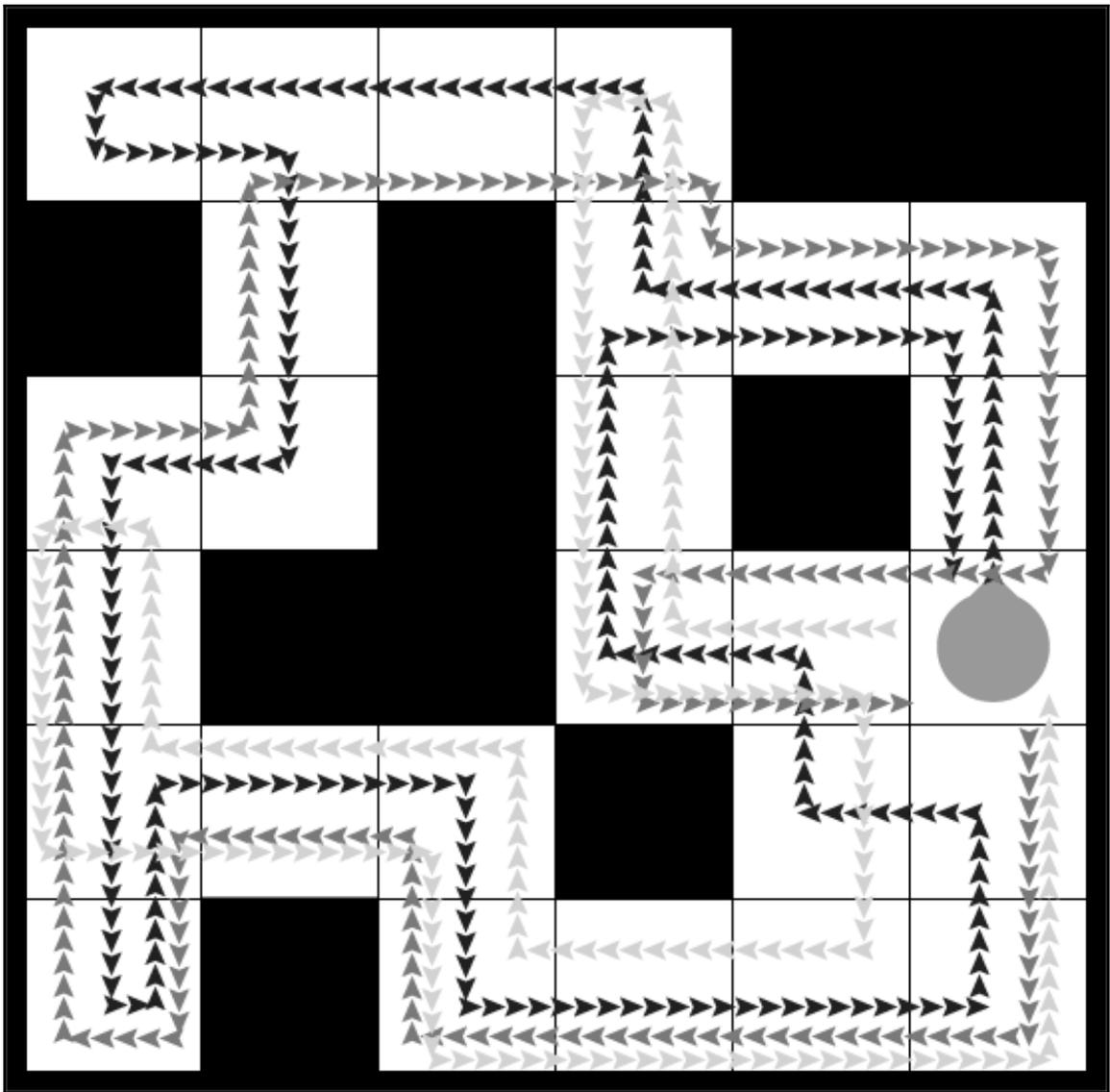
Chapter 6: Navigation Behavior and Pathfinding

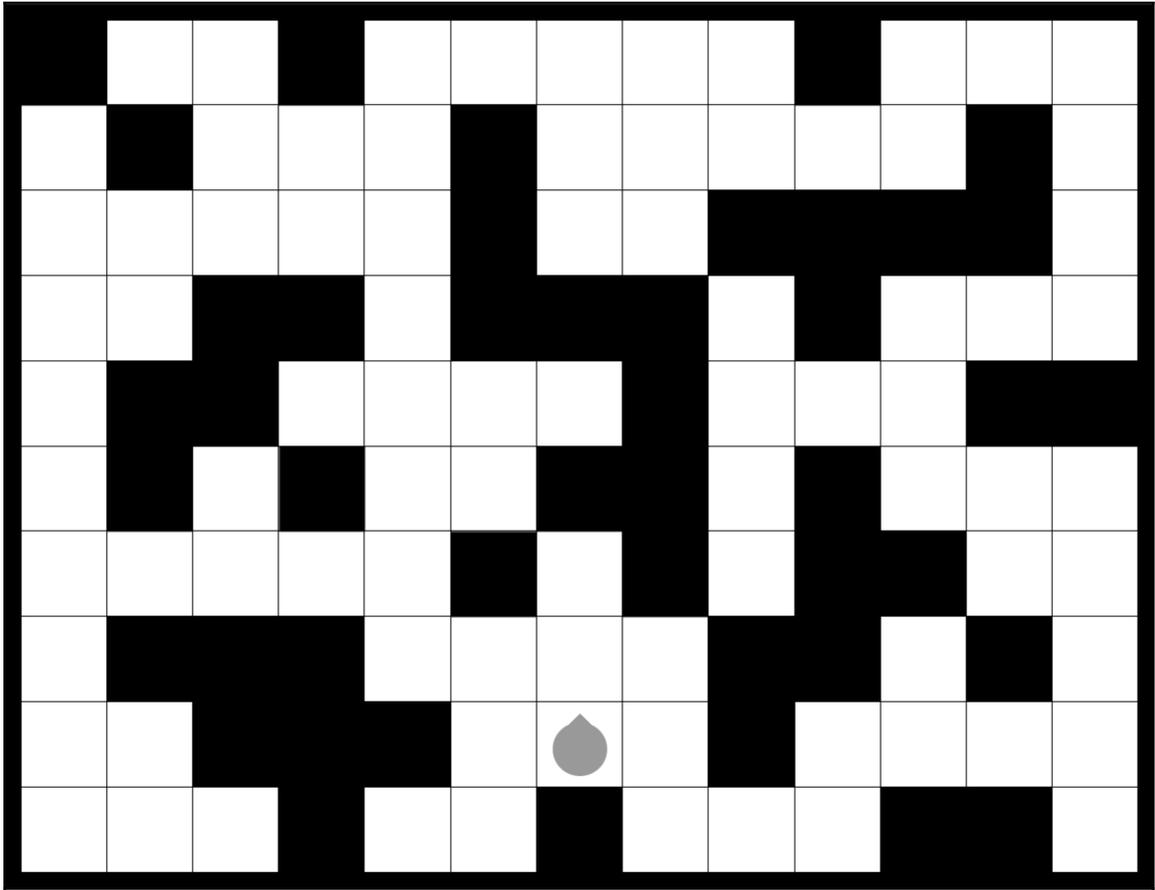


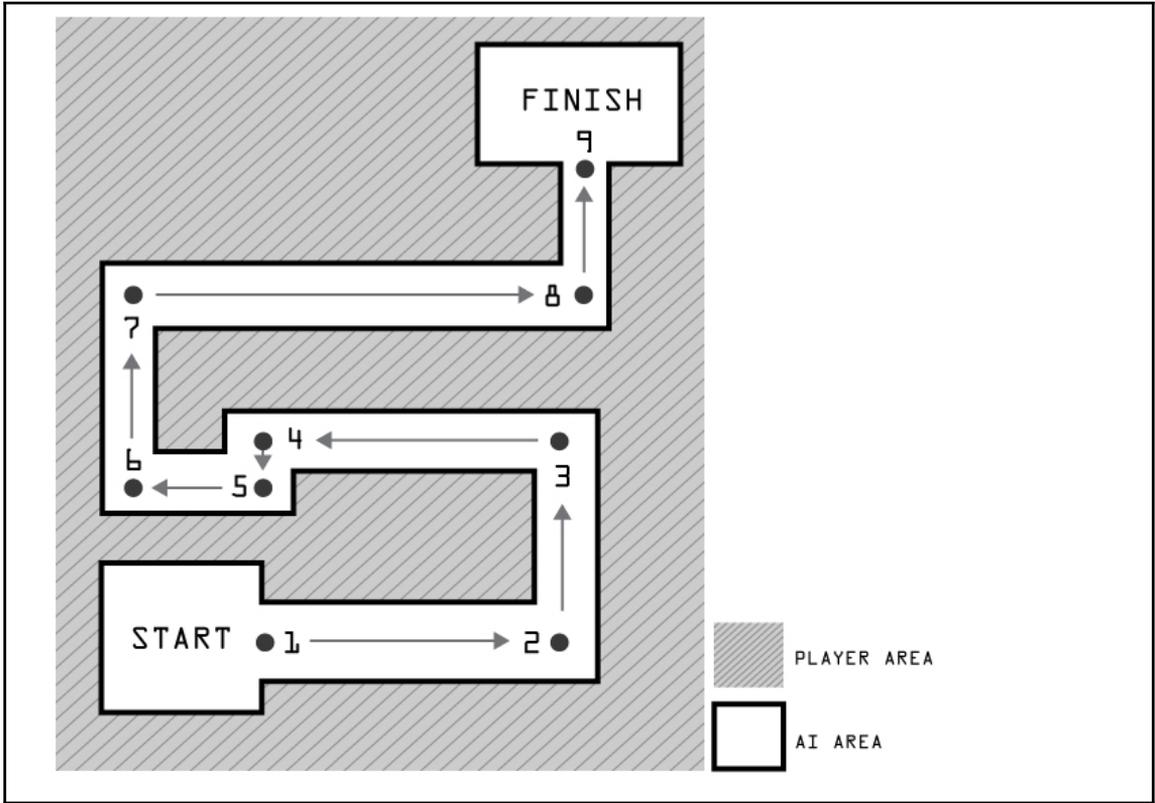


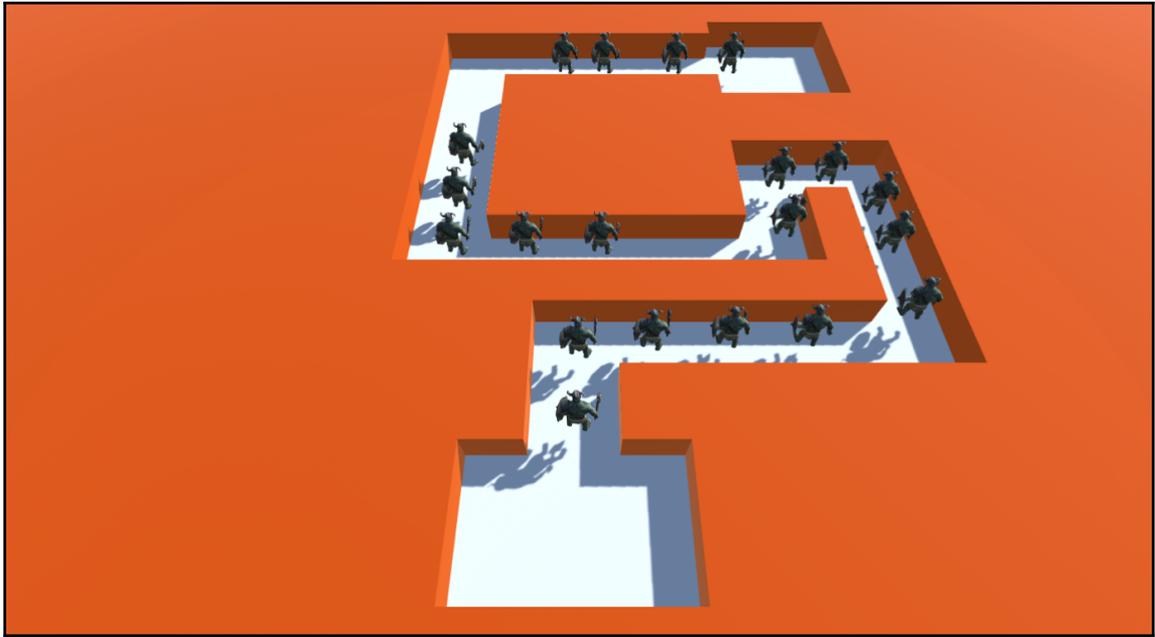


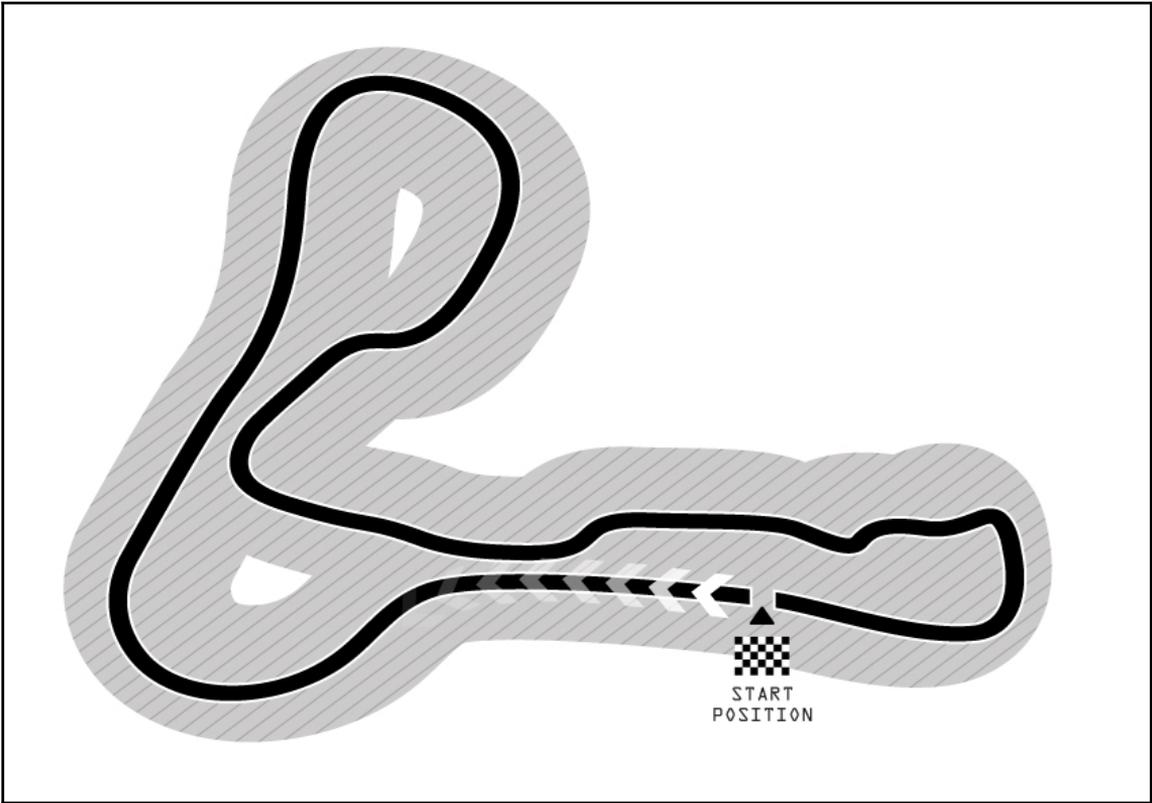


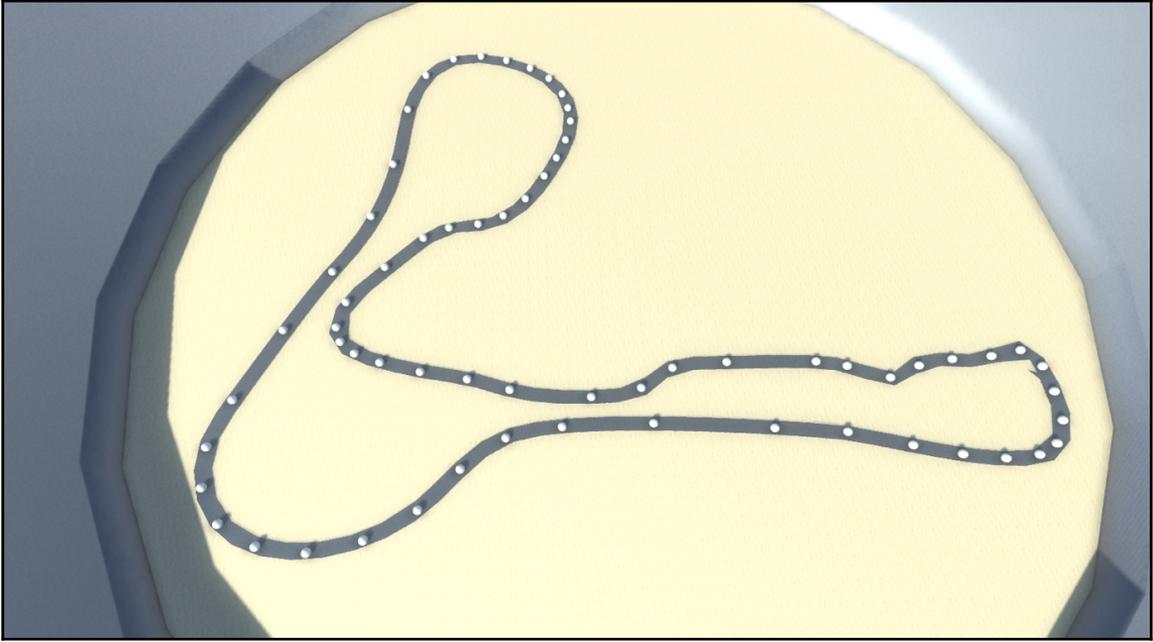


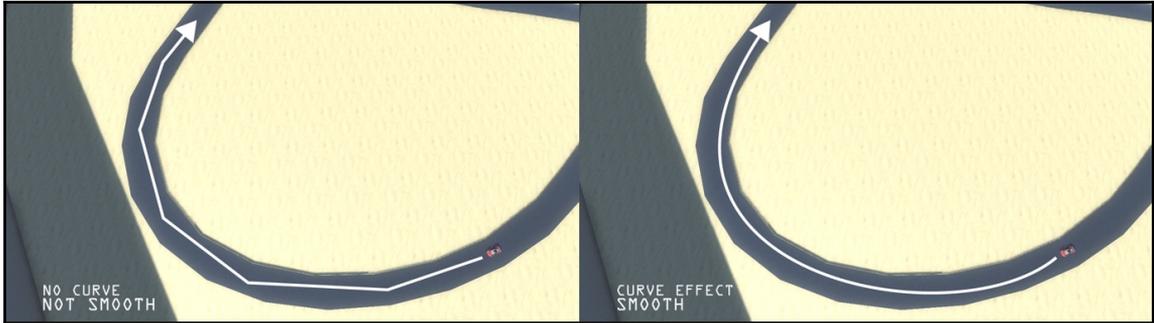
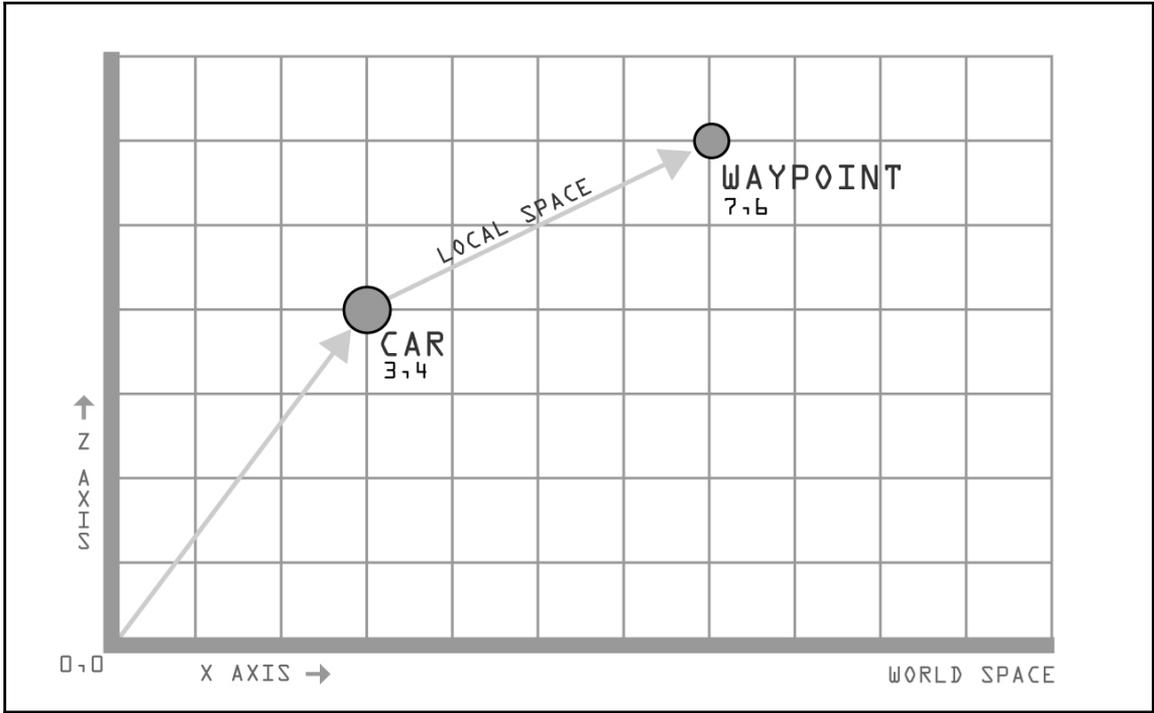


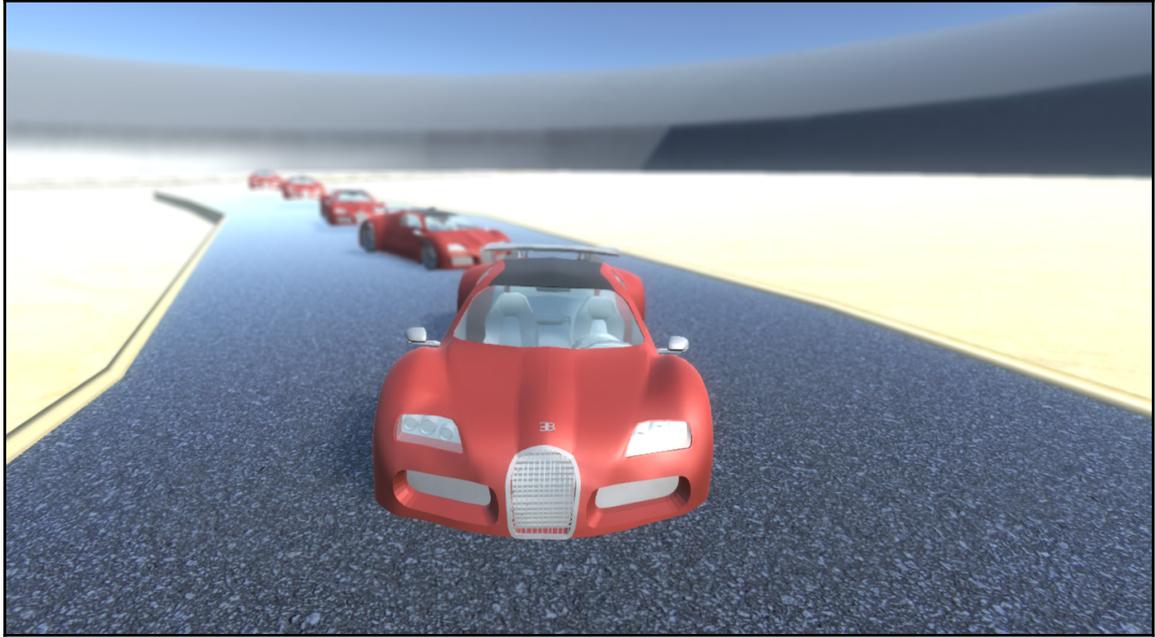


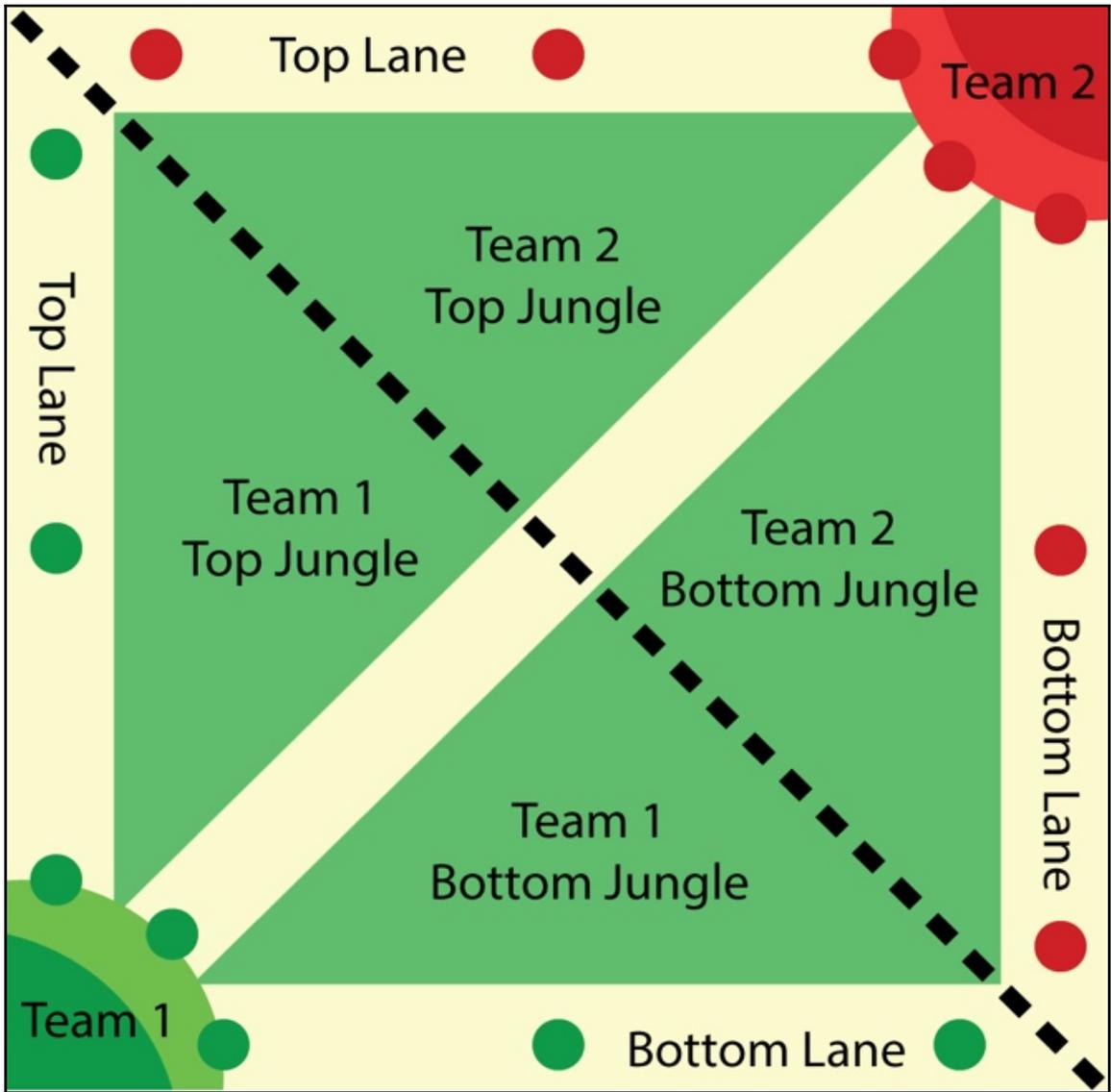


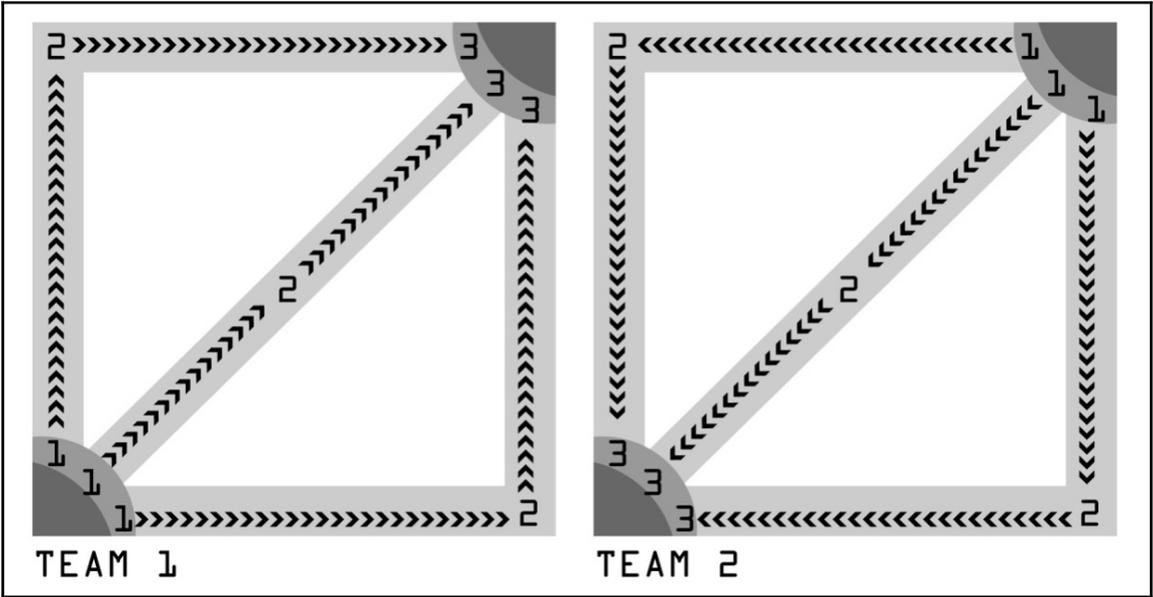


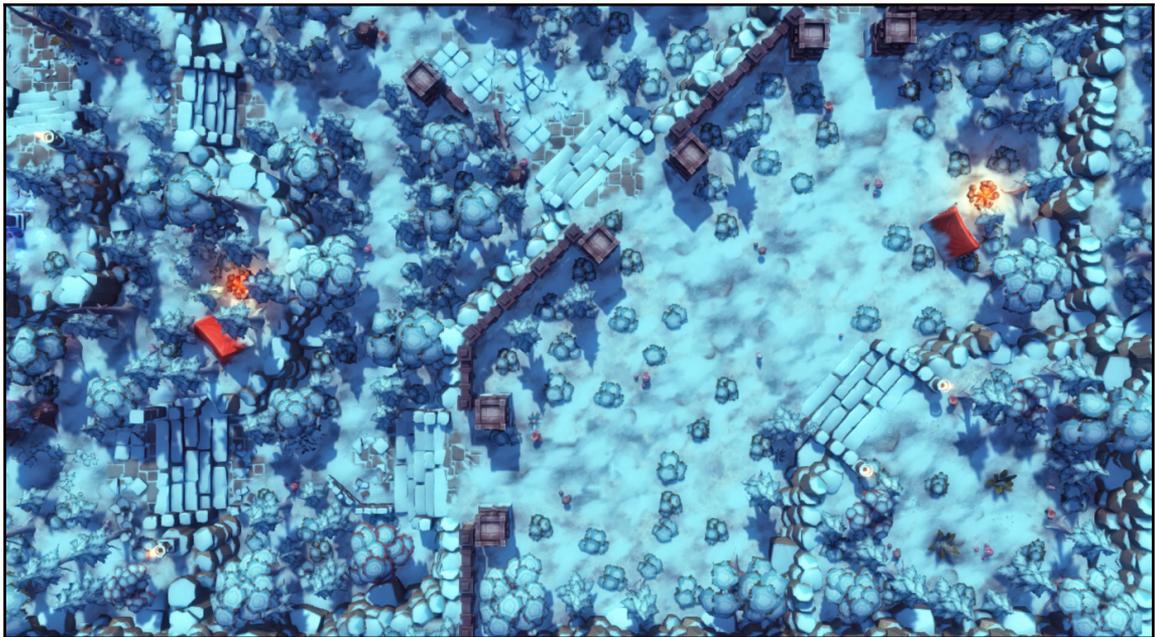


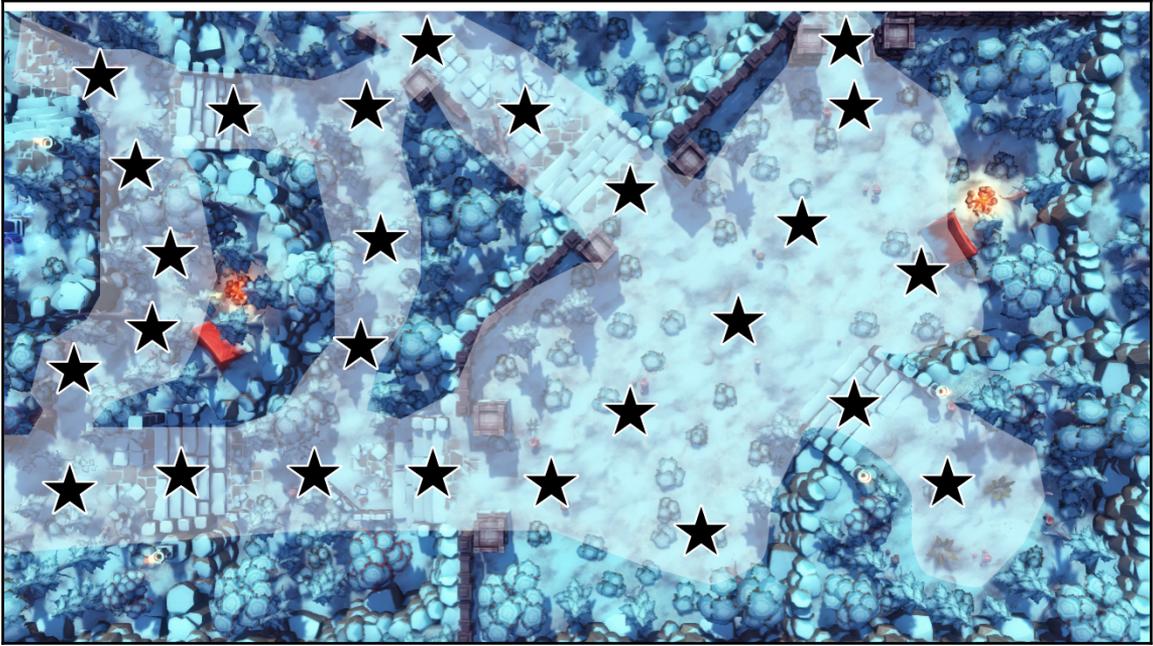


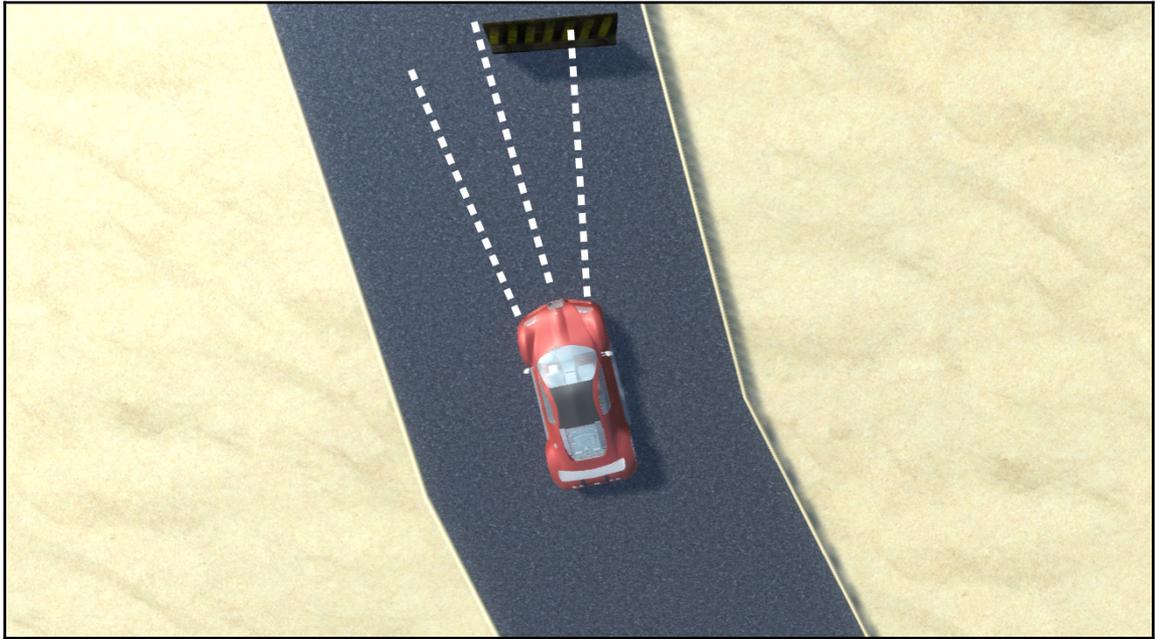
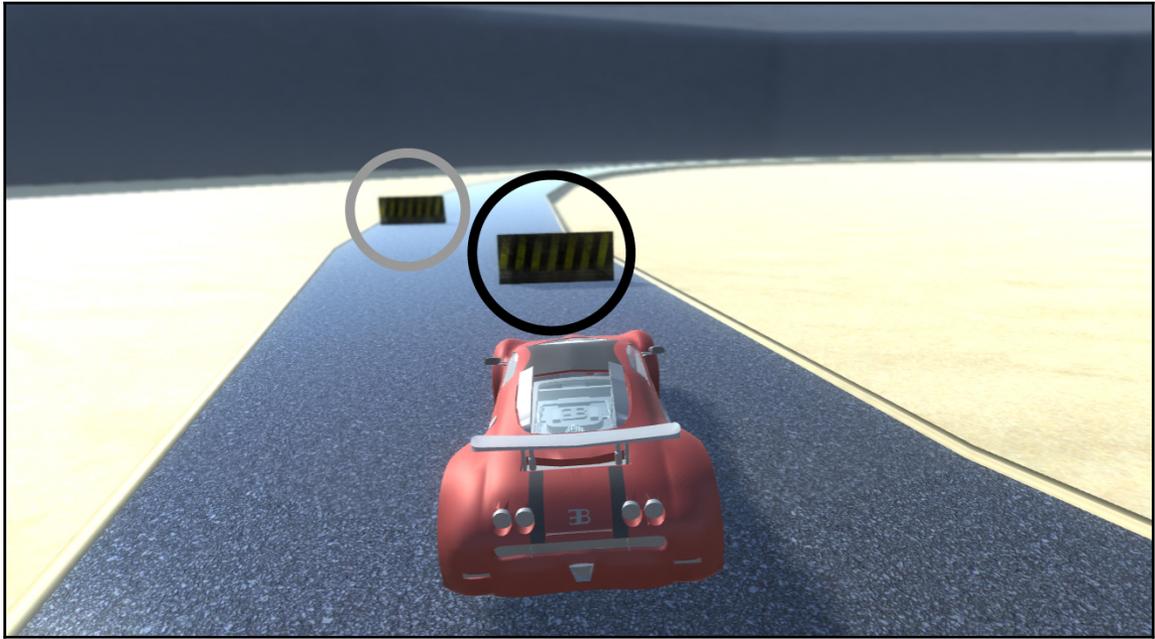


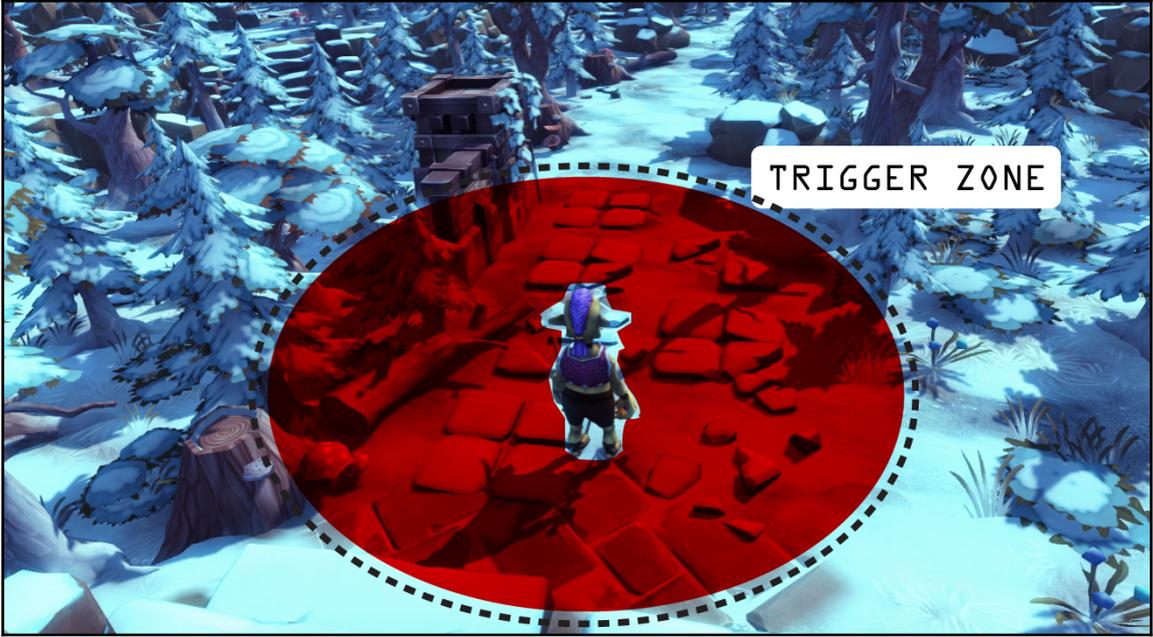












Chapter 7: Advanced Pathfinding





					B						
							14 28 42	10 38 48	14 48 62		
							10 38 48	A	10 52 62		
							14 48 62	10 52 62	14 56 70		

					B						
							28 14 42	24 24 48	28 34 62		
							24 24 48	14 28 42	10 38 48	14 48 62	
							28 34 62	10 38 48	A	10 52 62	
							14 48 62	10 52 62	14 56 70		

					B						
							14 28 42	10 38 48	14 48 62		
							10 38 48	A	10 52 62		
							14 48 62	10 52 62	14 56 70		

					B						
						24 24 48	14 28 42	10 38 48	14 48 62		
						28 34 62	10 38 48	A	10 52 62		
							14 48 62	10 52 62	14 56 70		

					B						
					34 20 54	24 24 48	14 28 42	10 38 48	14 48 62		
					38 30 68	28 34 62	10 38 48	A	10 52 62		
							14 48 62	10 52 62	14 56 70		

					B						
									24 44 68		
					34 20 54	24 24 48	14 28 42	10 38 48	14 48 62		
					38 30 68	28 34 62	10 38 48	A	10 52 62		
							14 48 62	10 52 62	14 56 70		

					B						
										24 44 68	
					34 20 54	24 24 48	14 28 42	10 38 48	14 48 62		
					38 30 68	20 34 54	10 38 48	A	10 52 62		
						24 44 68	14 48 62	10 52 62	14 56 70		

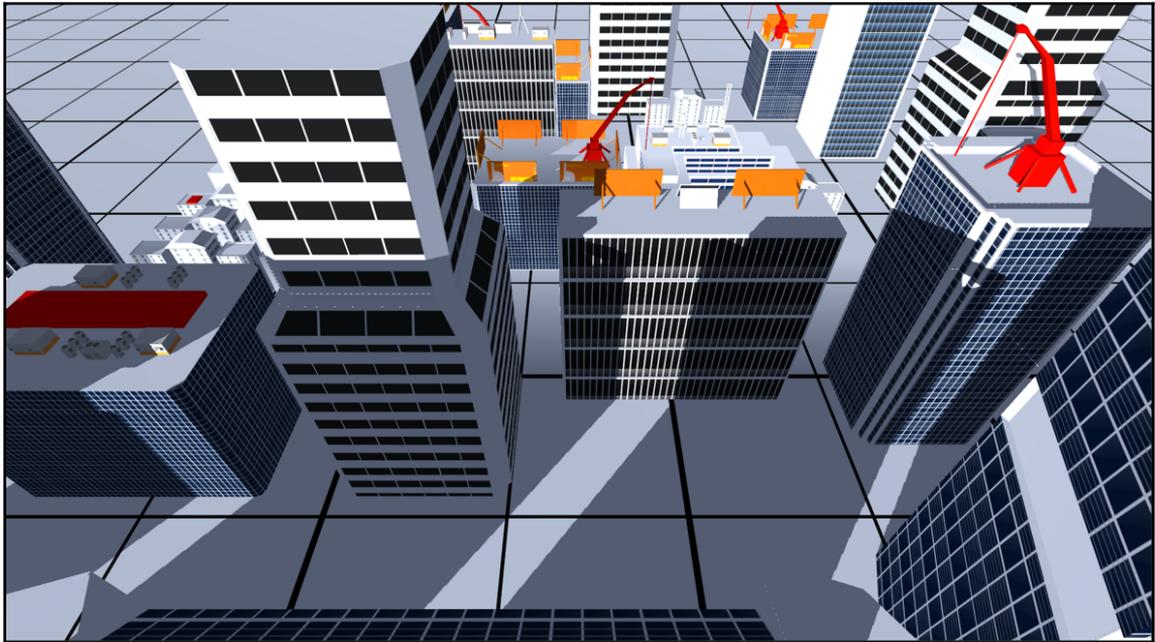
					B						
										24 44 68	
					44 24 68	34 20 54	24 24 48	14 28 42	10 38 48	14 48 62	
					48 34 82	38 30 68	20 34 54	10 38 48	A	10 52 62	
						24 44 68	14 48 62	10 52 62	14 56 70		

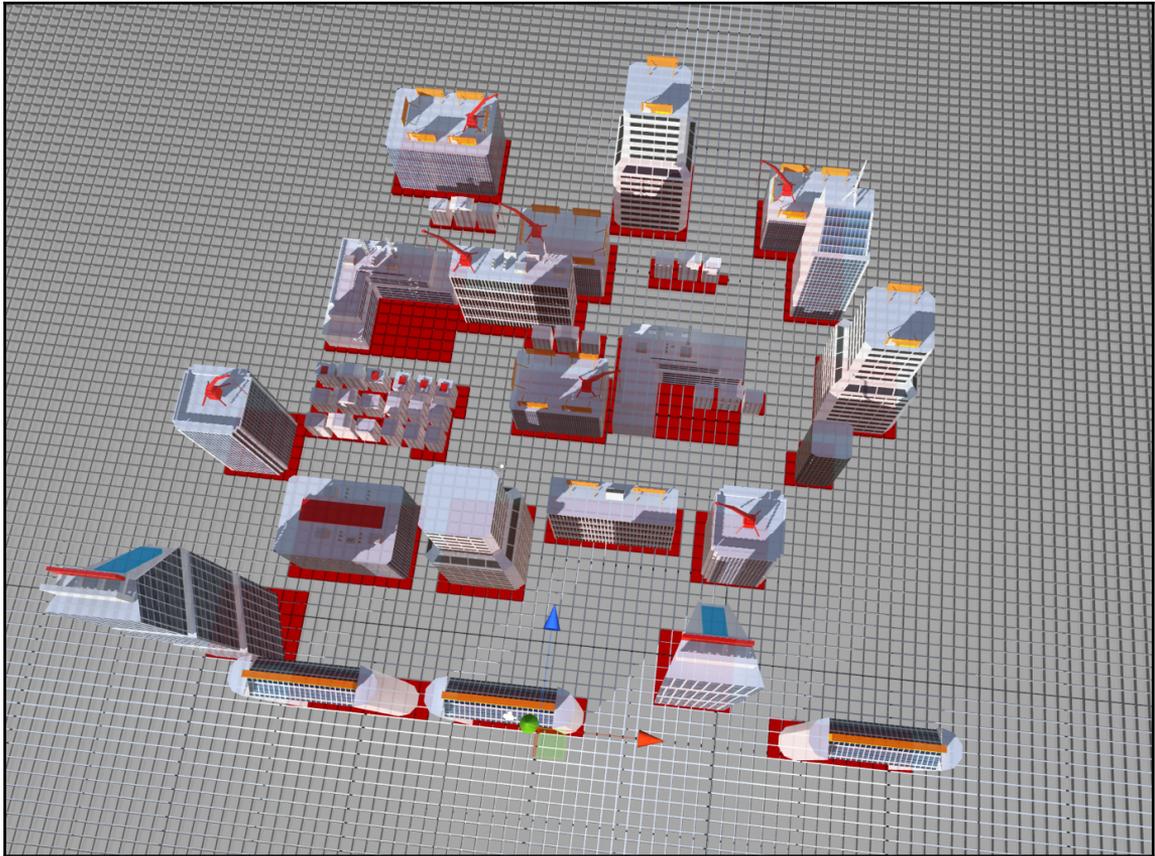
					B						
										24 44 68	
				44 24 68	34 20 54	24 24 48	14 28 42	10 38 48	14 48 62		
				48 34 82	30 30 60	20 34 54	10 38 48	A	10 52 62		
					34 40 74	24 44 68	14 48 62	10 52 62	14 56 70		

					B						
										24 44 68	
				44 24 68	34 20 54	24 24 48	14 28 42	10 38 48	14 48 62		
				48 34 82	30 30 60	20 34 54	10 38 48	A	10 52 62		
				44 44 88	34 40 74	24 44 68	14 48 62	10 52 62	14 56 70		

					B			38 30 68	34 40 74	38 50 88	
			58 24 82						24 44 68	28 54 82	
			54 28 82	44 24 68	34 20 54	24 24 48	14 28 42	10 38 48	14 48 62	24 58 82	
			58 38 96	48 34 82	30 30 60	20 34 54	10 38 48	A	10 52 62	20 62 82	
				44 44 88	34 40 74	24 44 68	14 48 62	10 52 62	14 56 70	24 66 90	

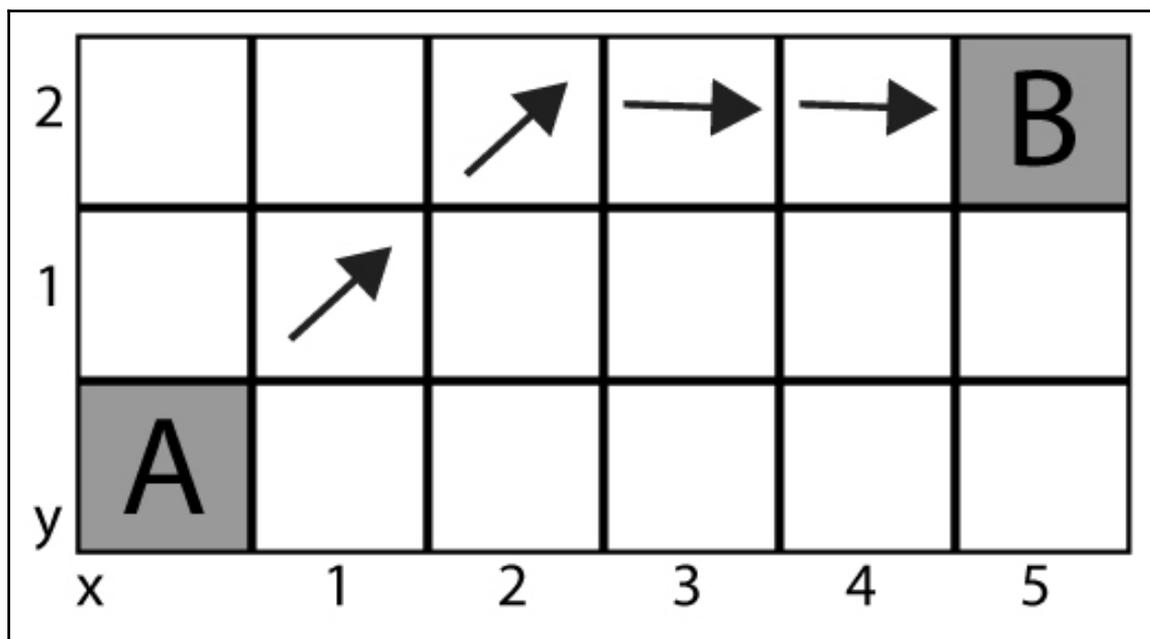
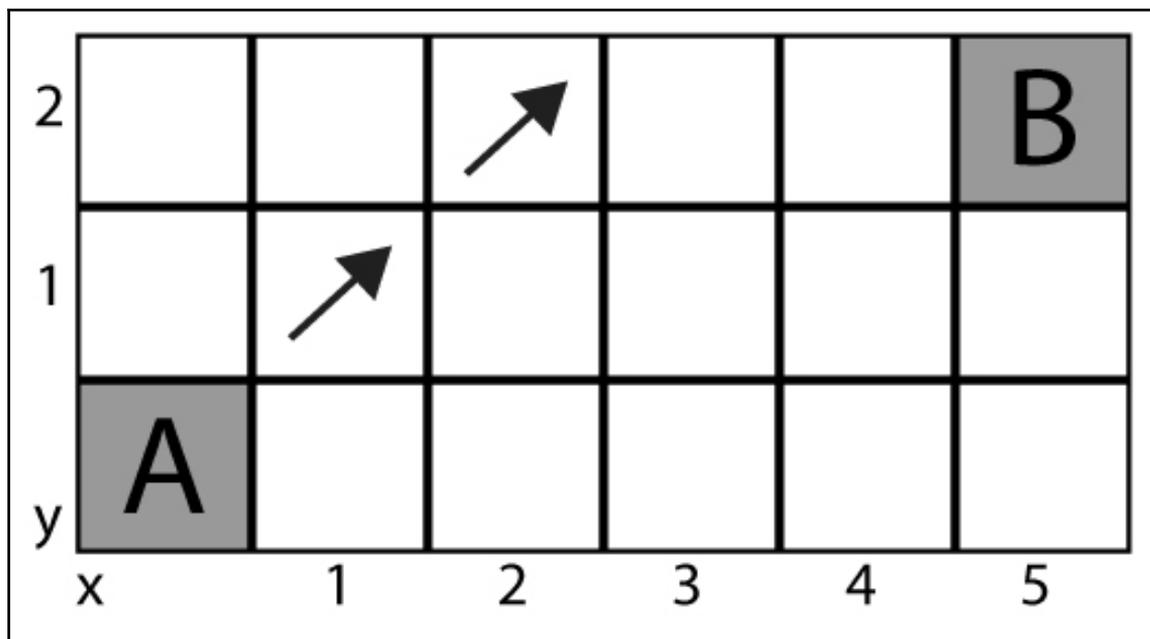
					72 10 82	62 14 76	52 24 76	48 34 82	52 44 96		
					68 0 68	58 10 68	48 20 68	38 30 68	34 40 74	38 50 88	
			58 24 82						24 44 68	28 54 82	
			54 28 82	44 24 68	34 20 54	24 24 48	14 28 42	10 38 48	14 48 62	24 58 82	
			58 38 96	48 34 82	30 30 60	20 34 54	10 38 48	A	10 52 62	20 62 82	
				44 44 88	34 40 74	24 44 68	14 48 62	10 52 62	14 56 70	24 66 90	

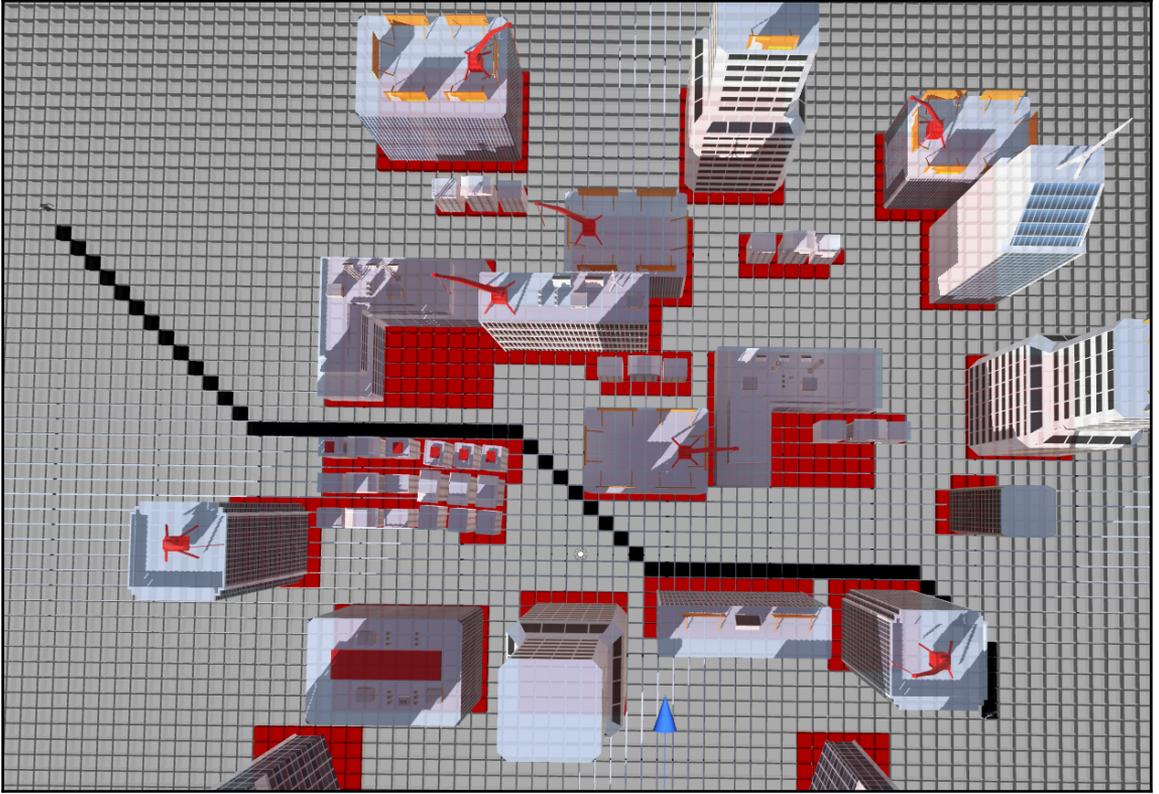


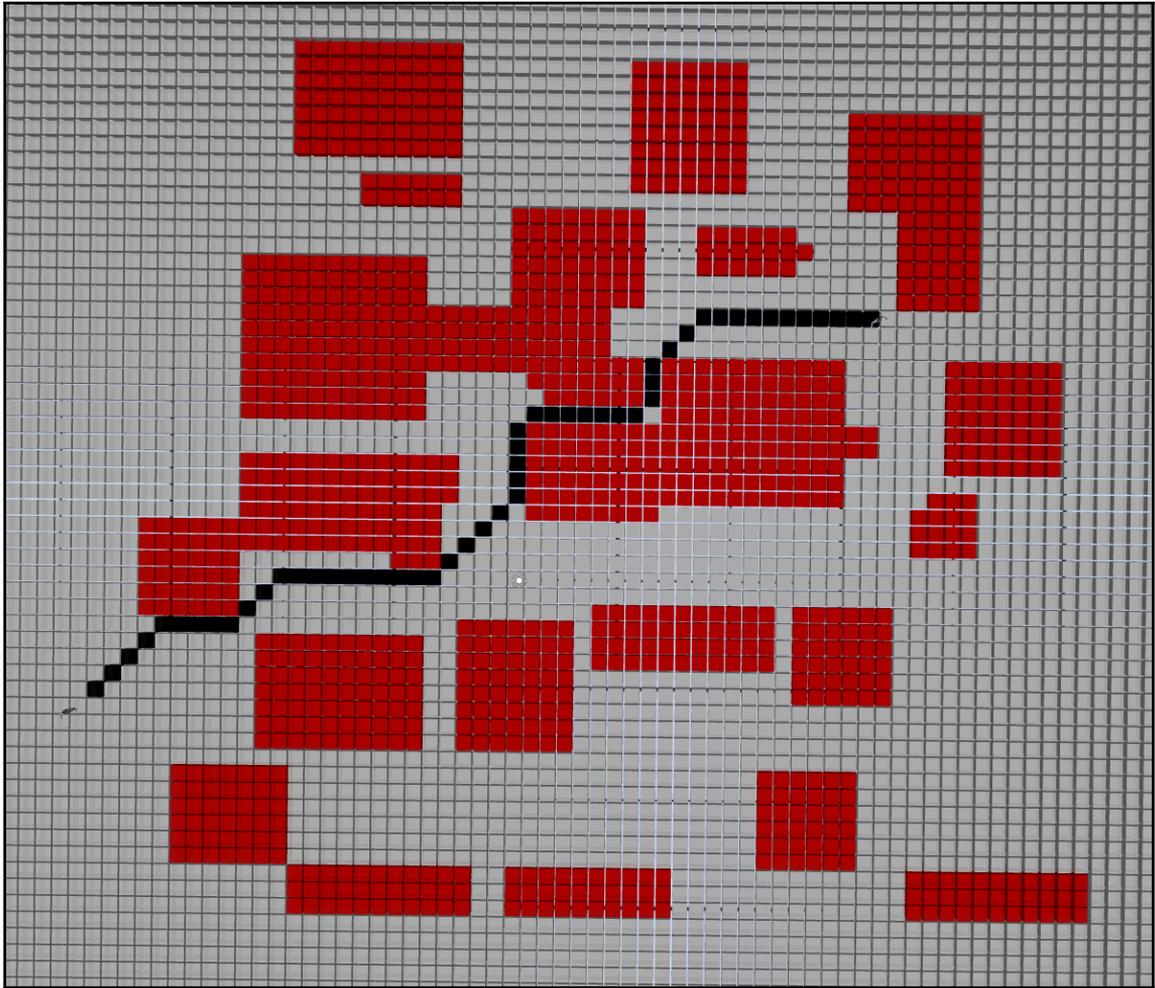




2						B
1						
y	A					
x		1	2	3	4	5







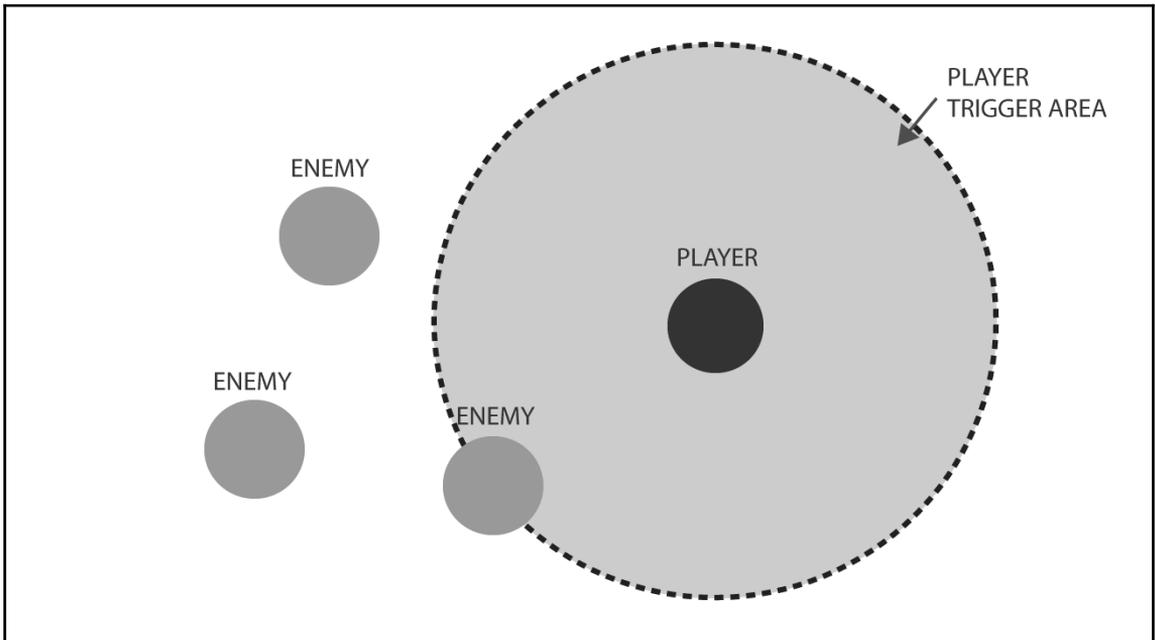
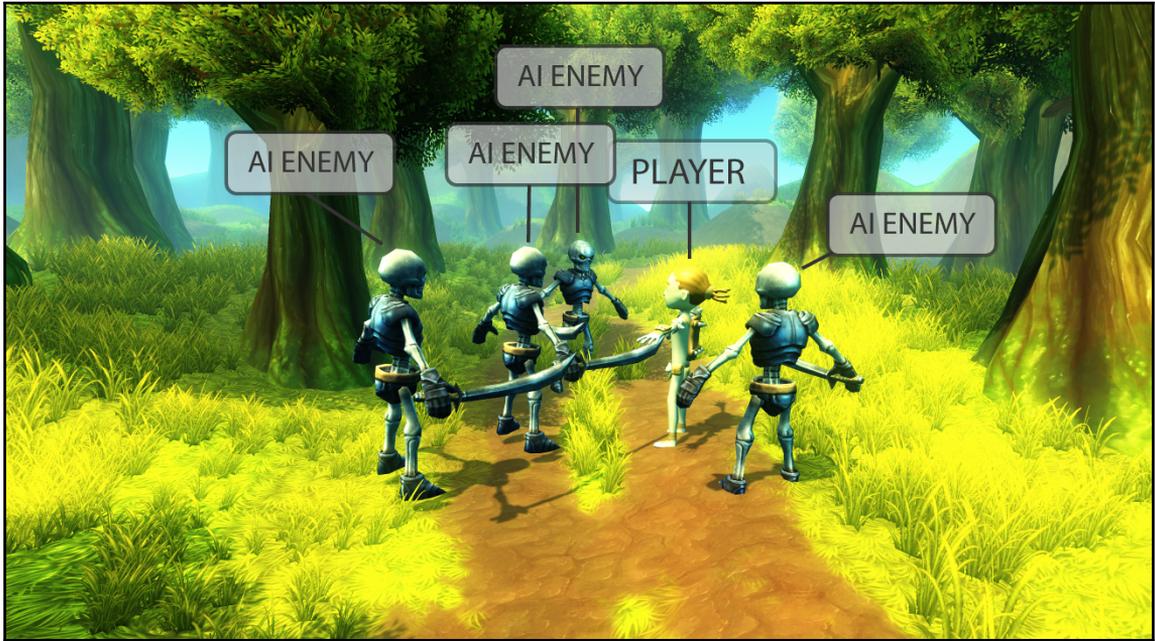


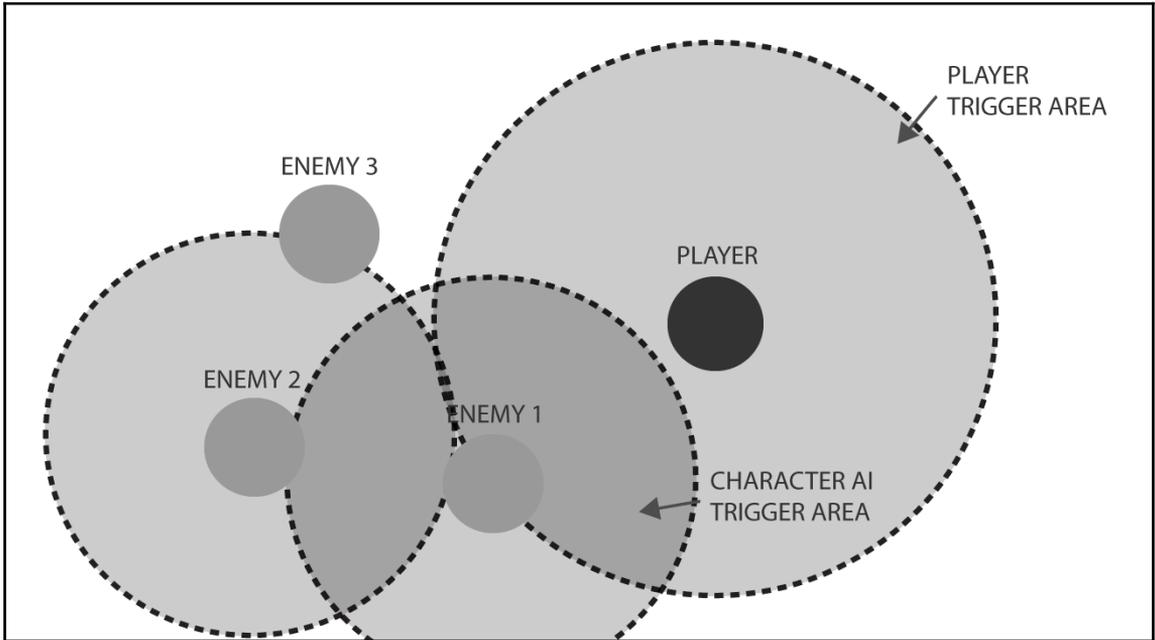
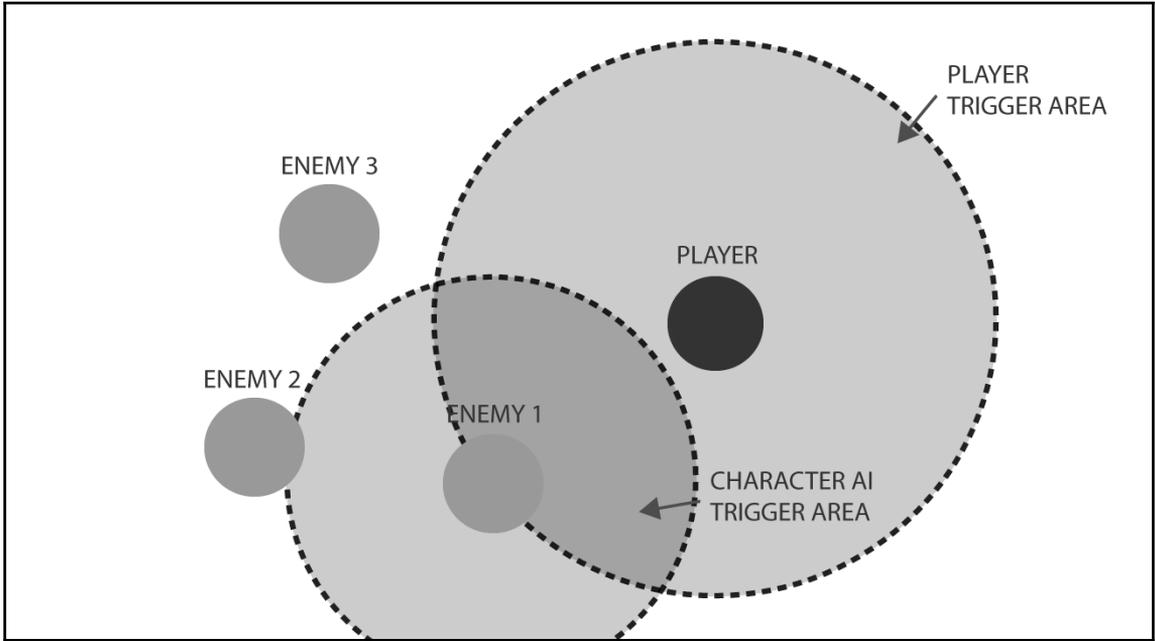
Chapter 8: Crowd Interactions

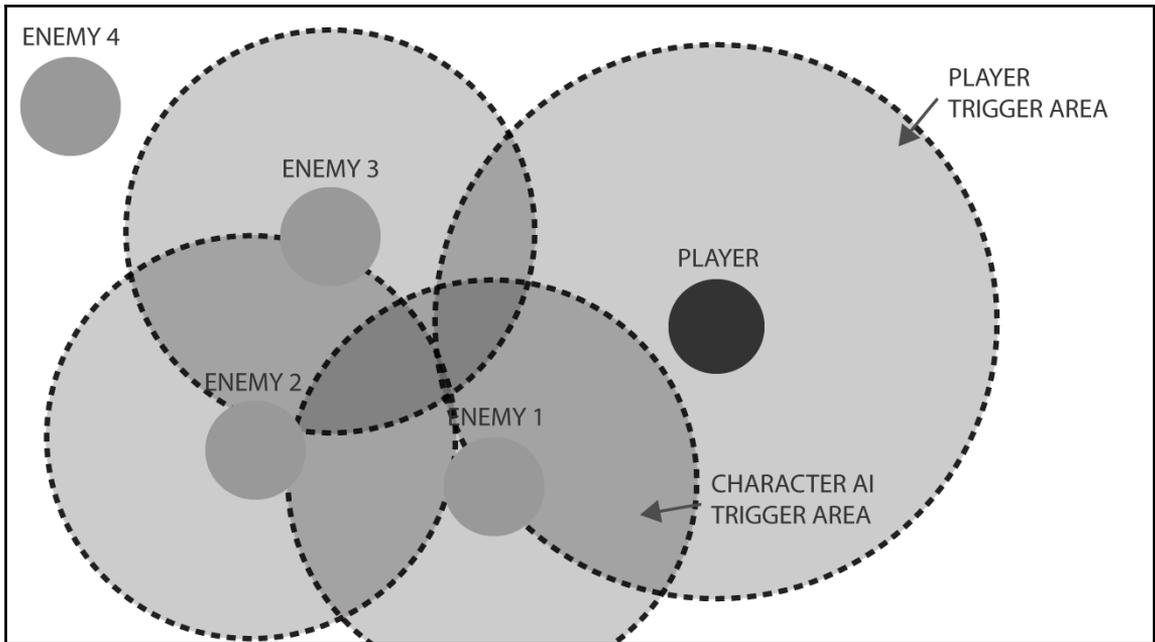






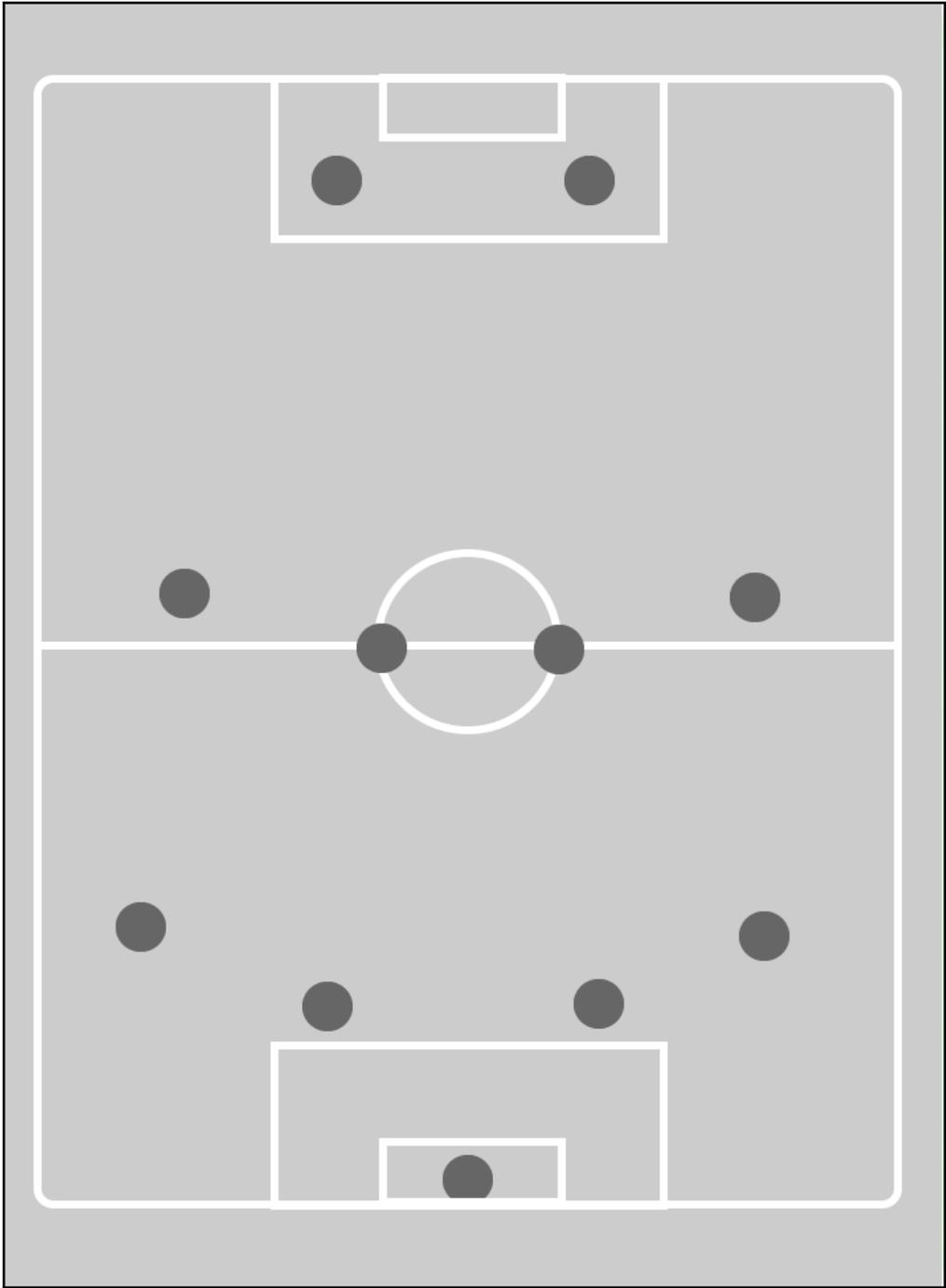


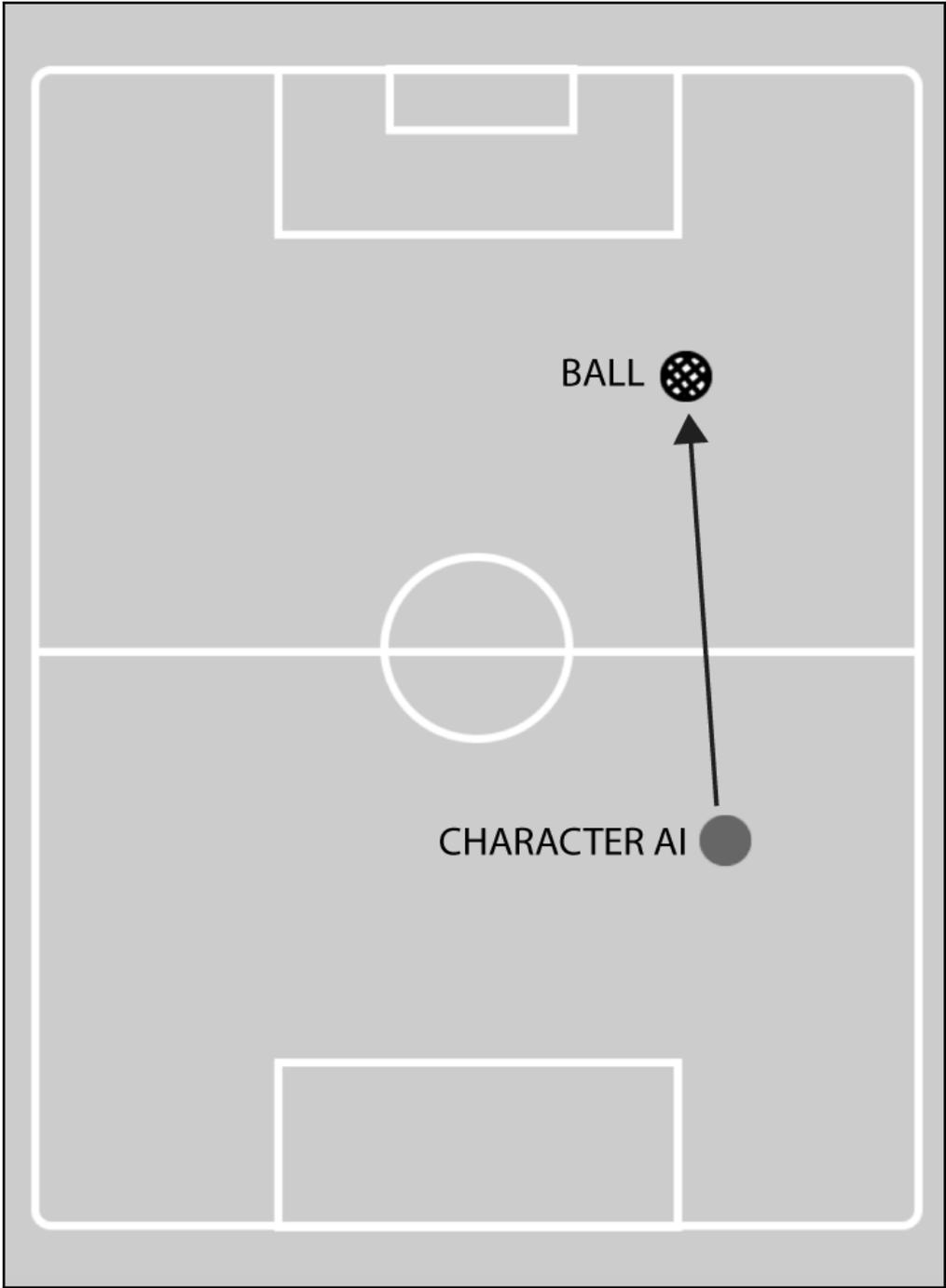


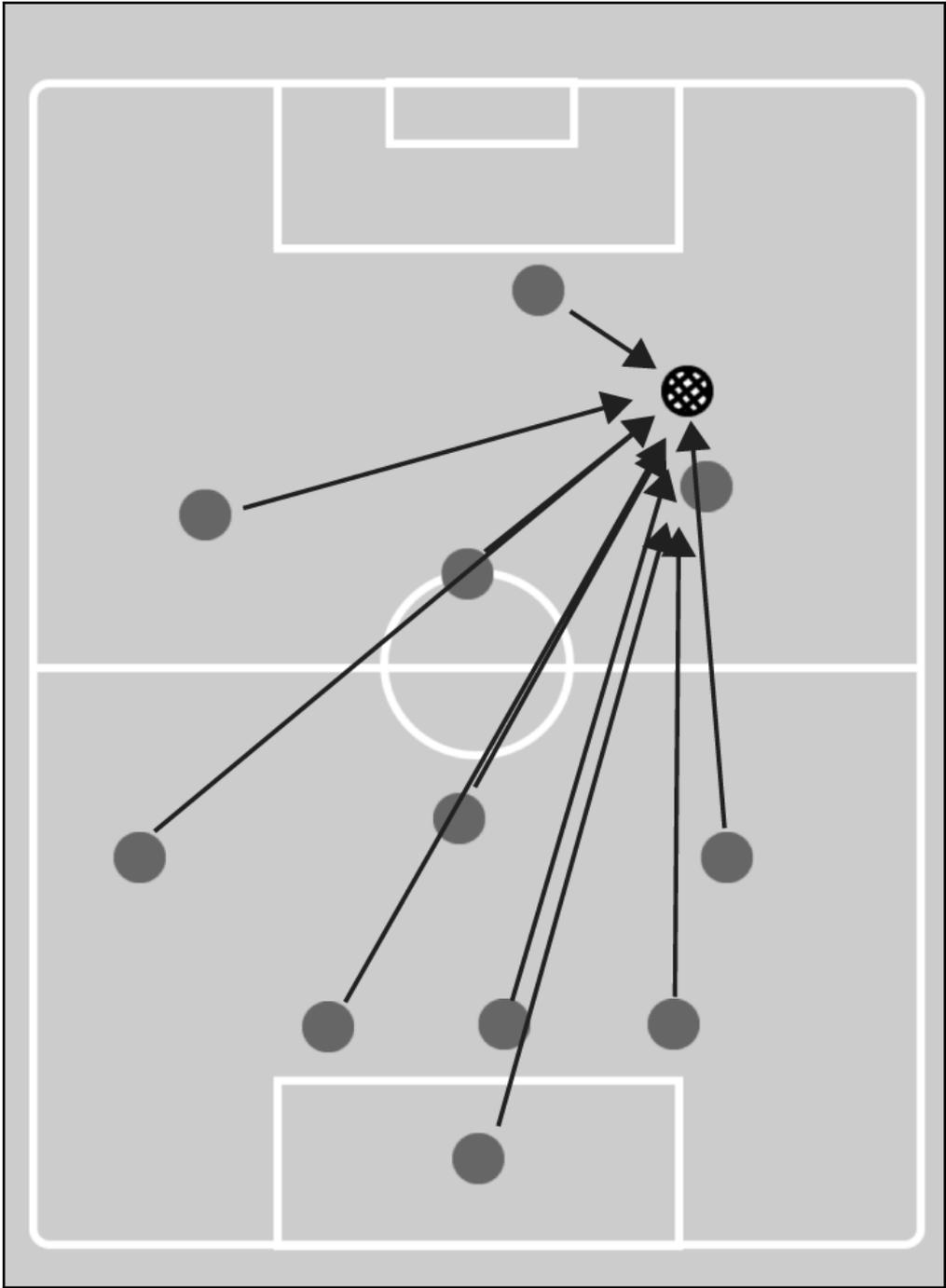


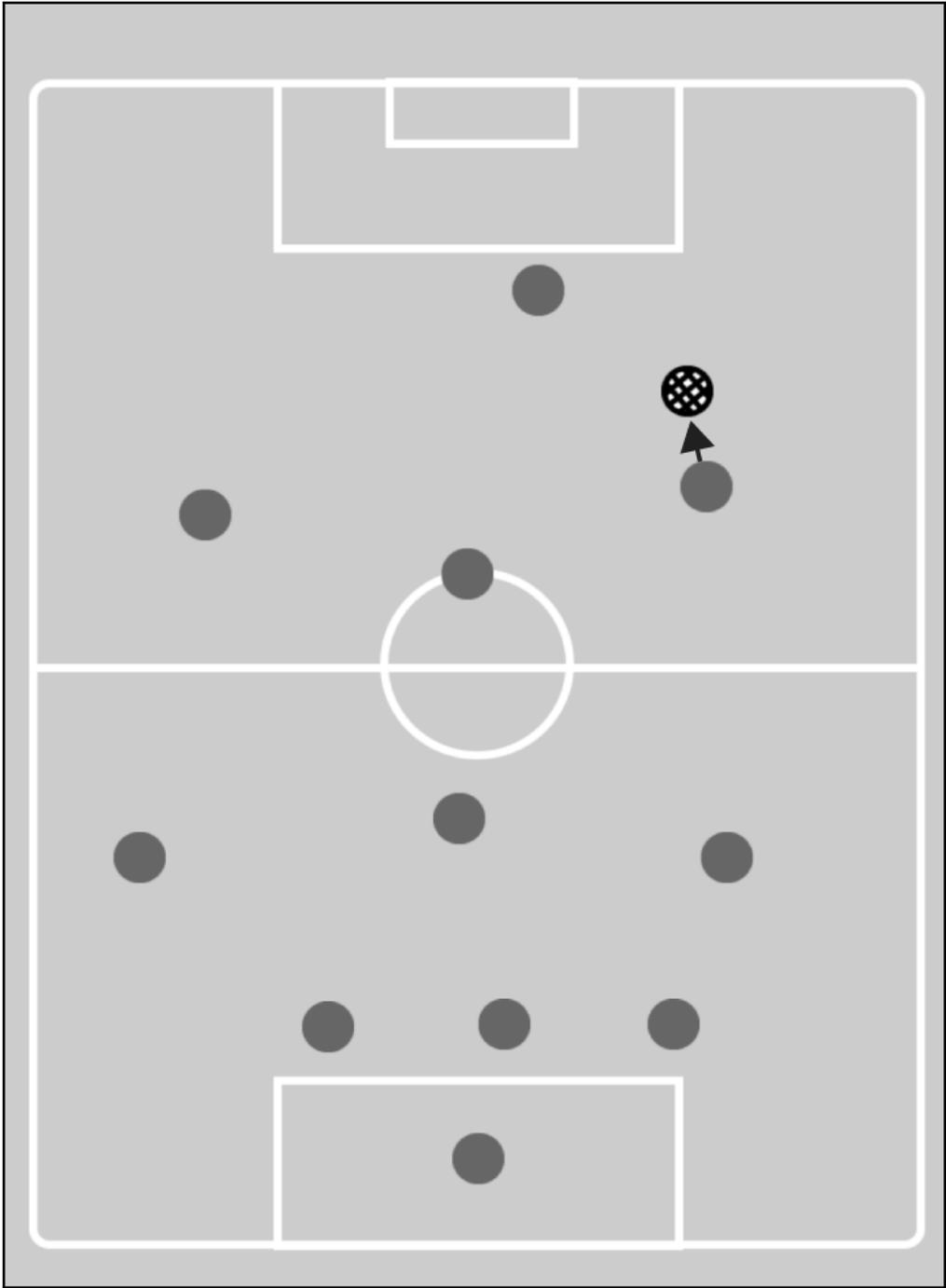


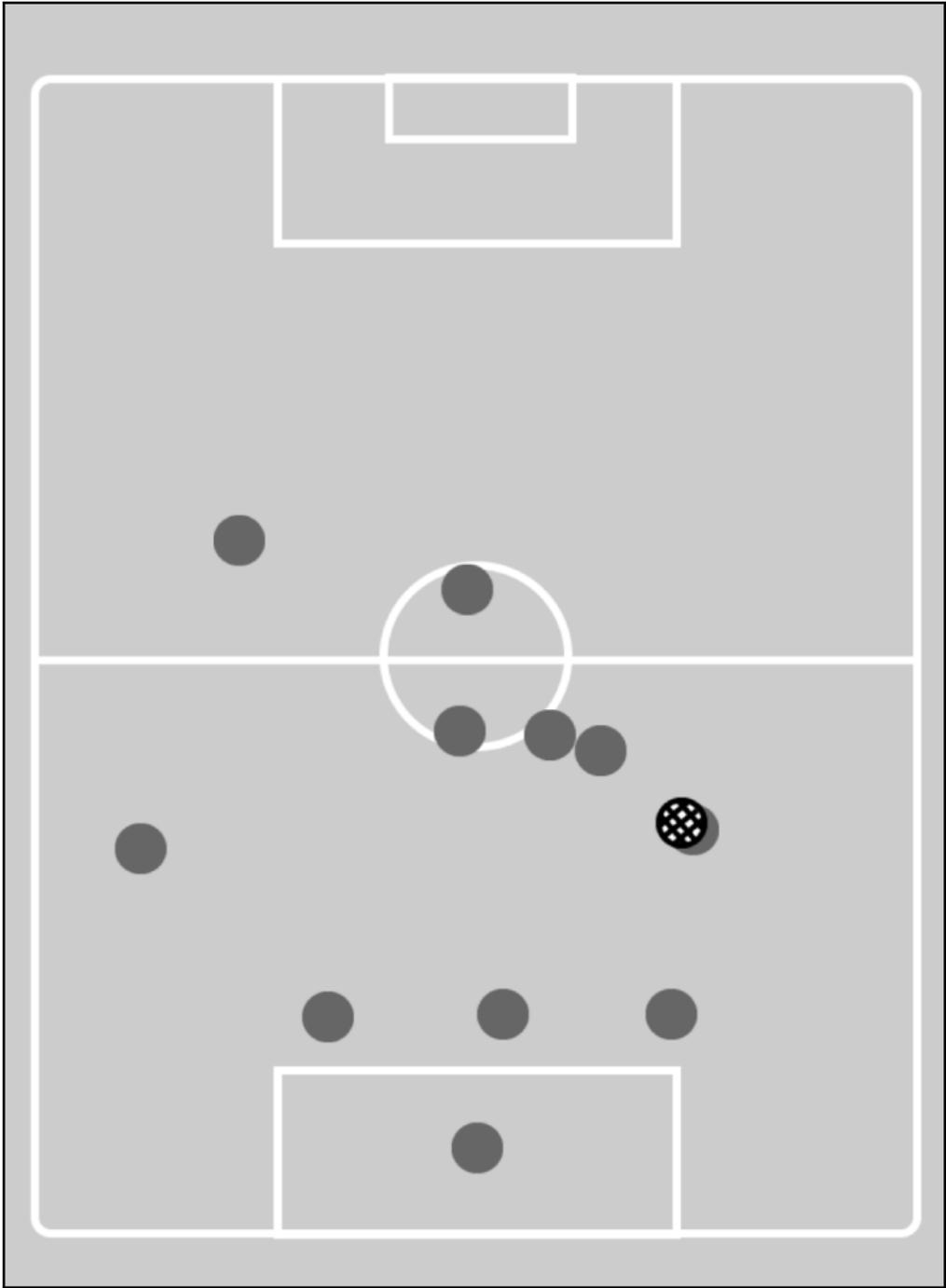
CHARACTER AI
TRIGGER AREA

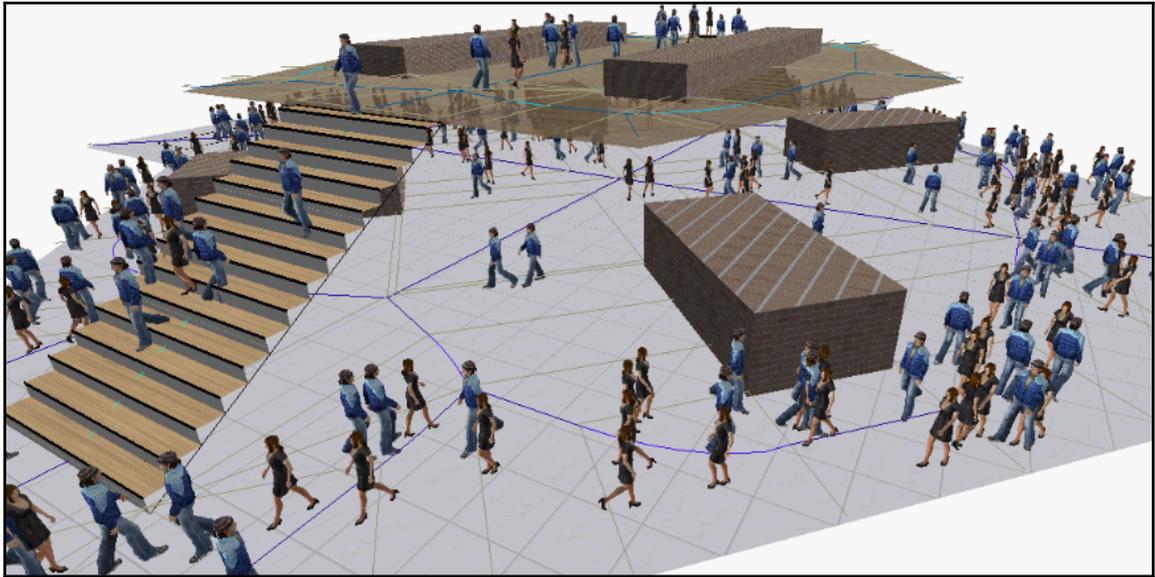




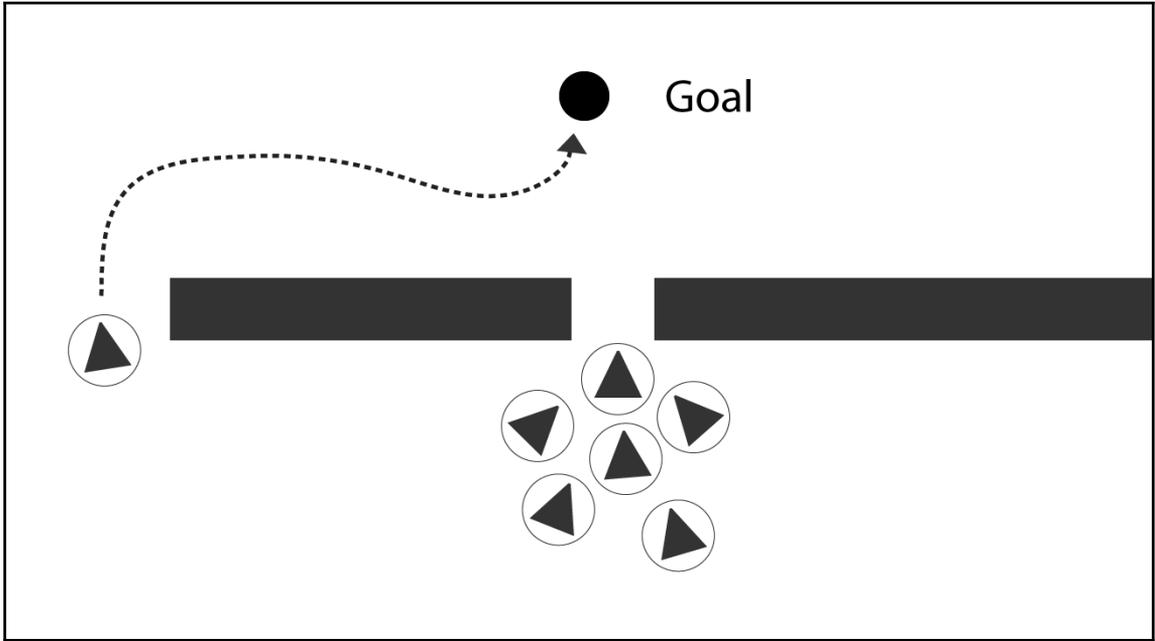




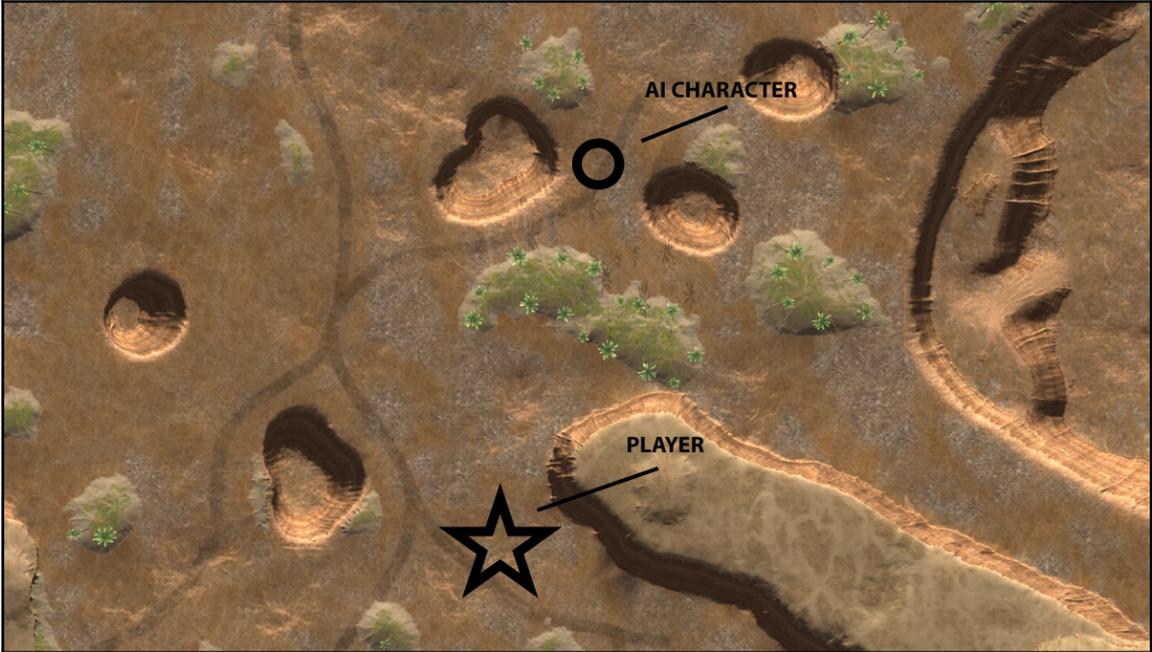


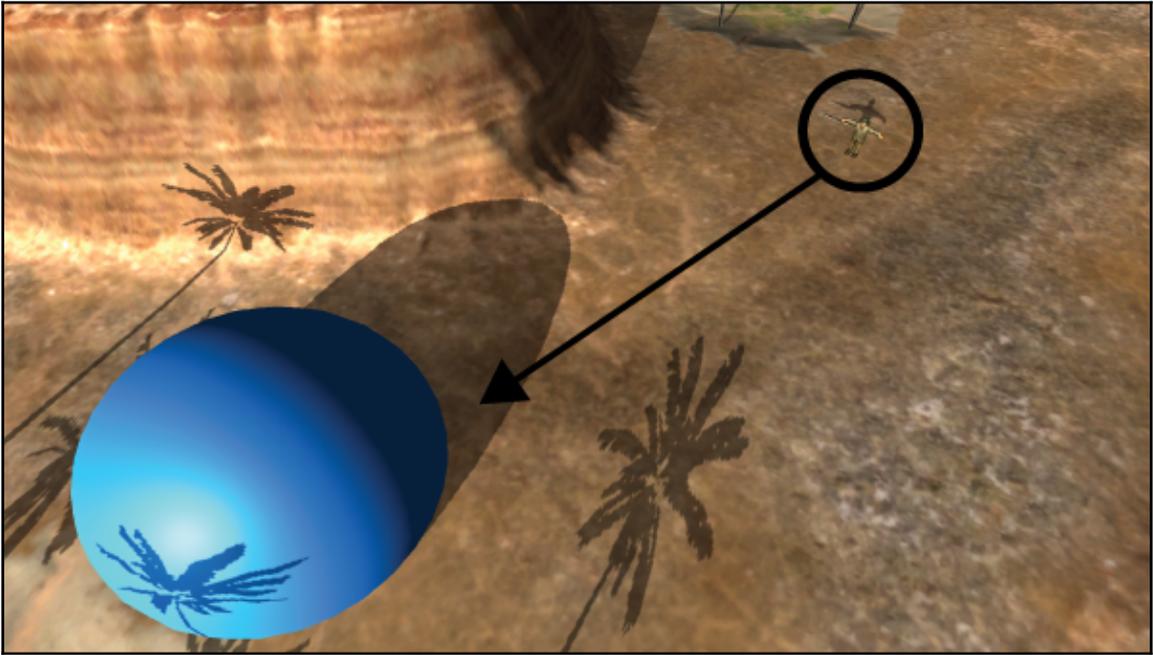
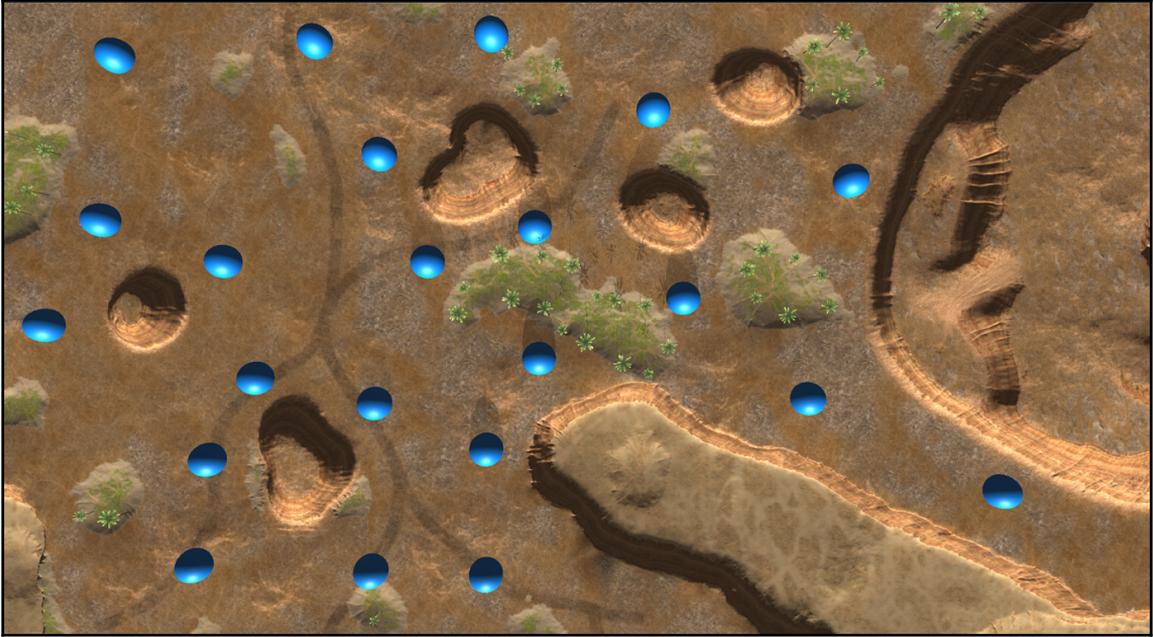






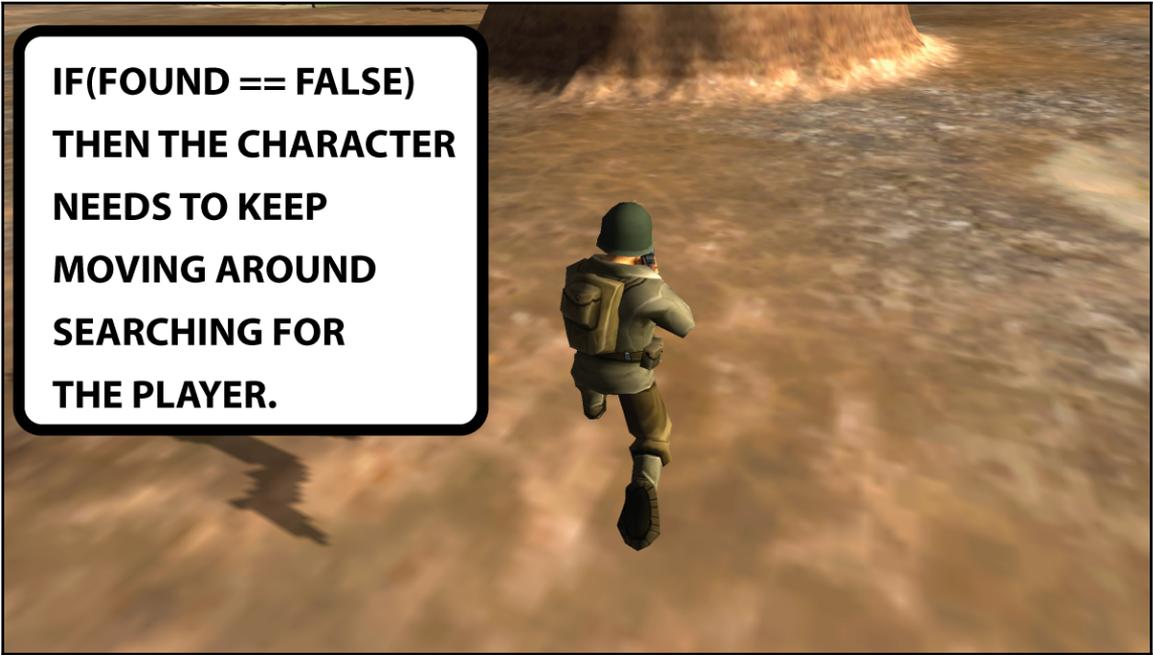
Chapter 9: AI Planning and Collision Avoidance







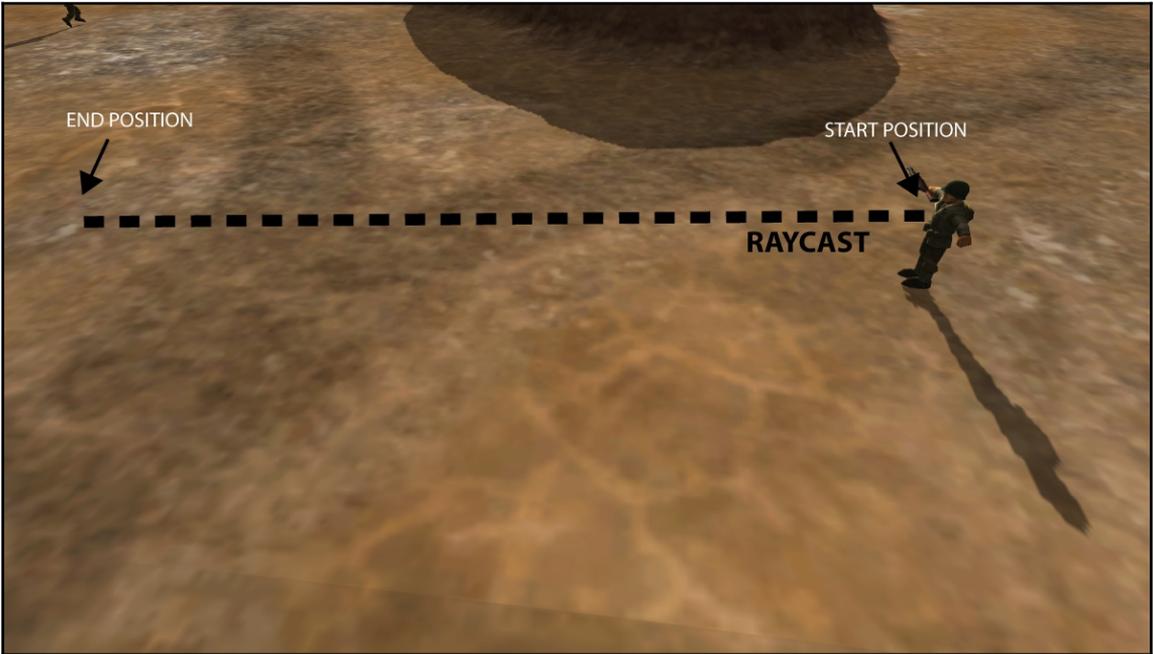
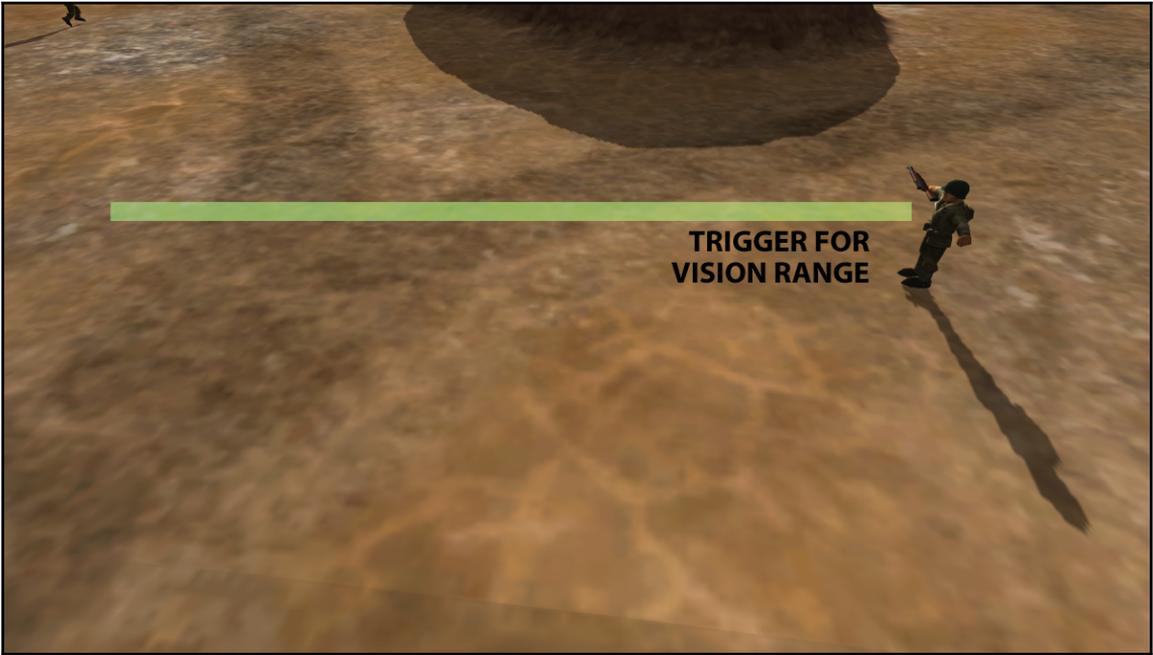
**IF(FOUND == FALSE)
THEN THE CHARACTER
NEEDS TO KEEP
MOVING AROUND
SEARCHING FOR
THE PLAYER.**



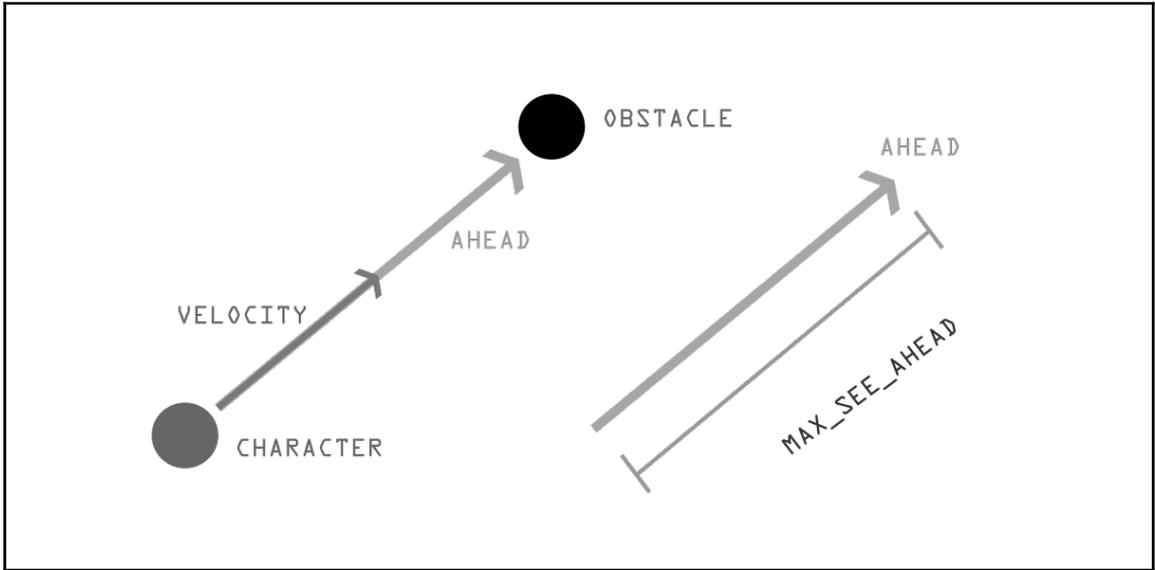
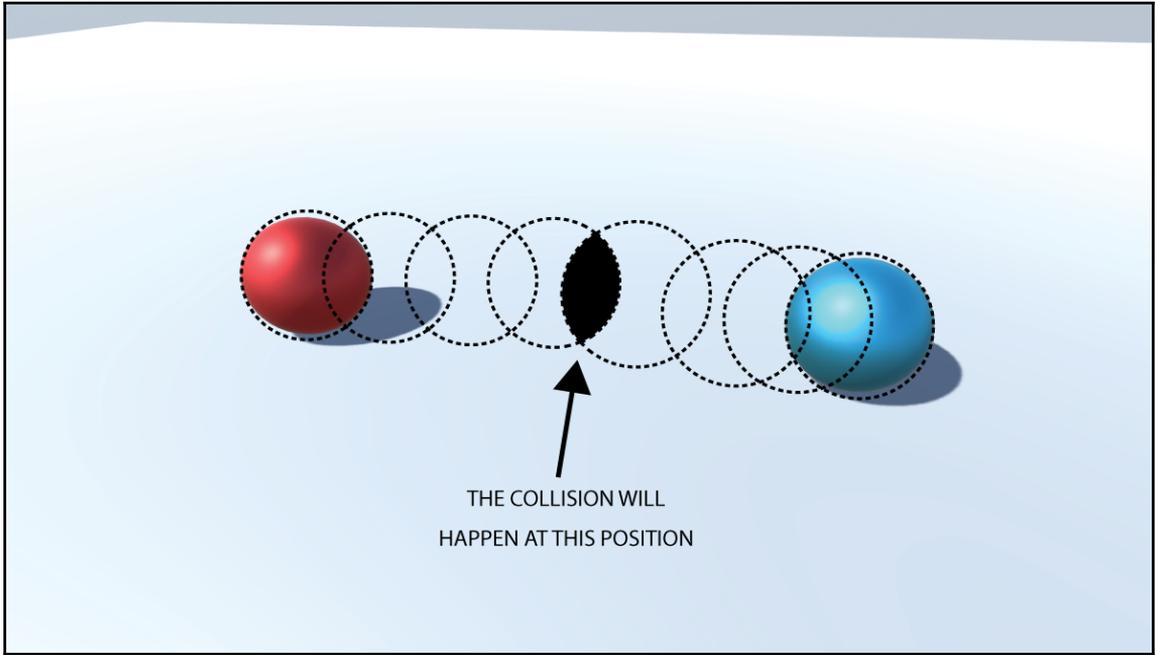
**FRONT
TRIGGER**

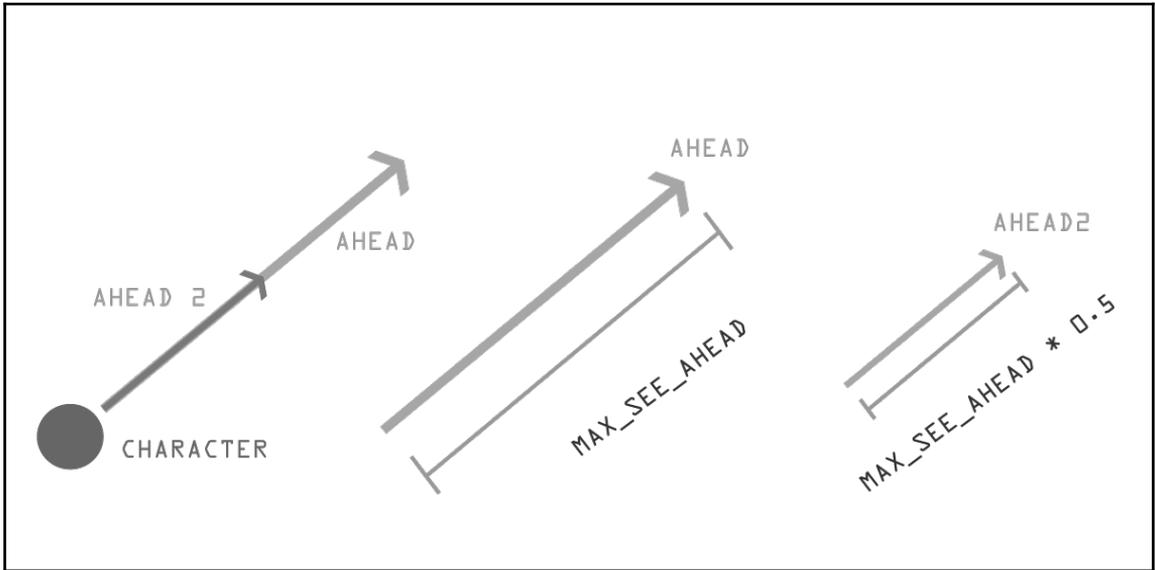
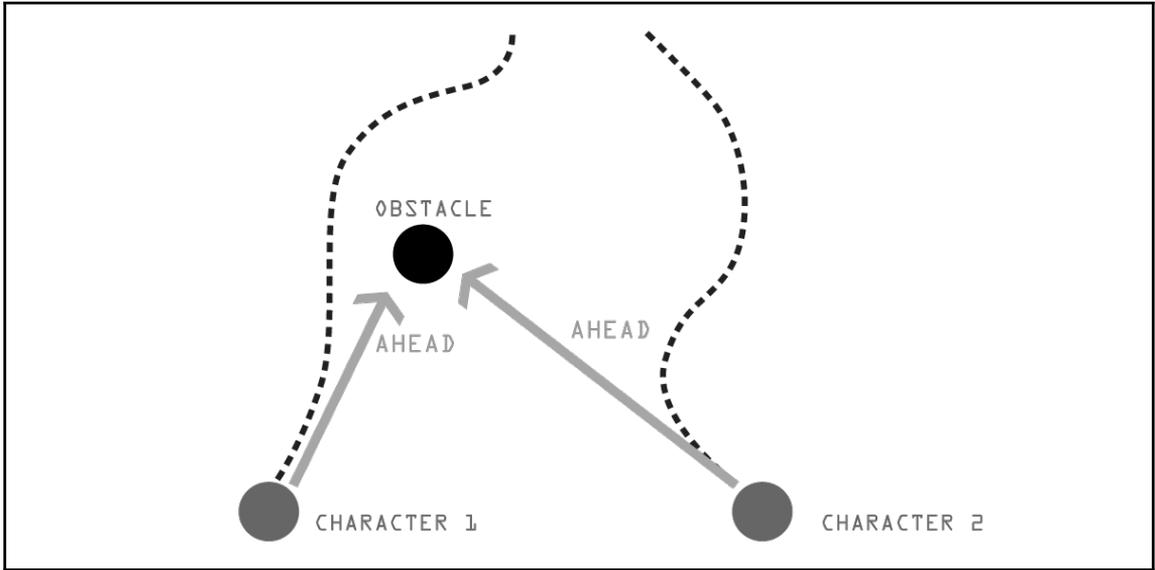
**BACK
TRIGGER**

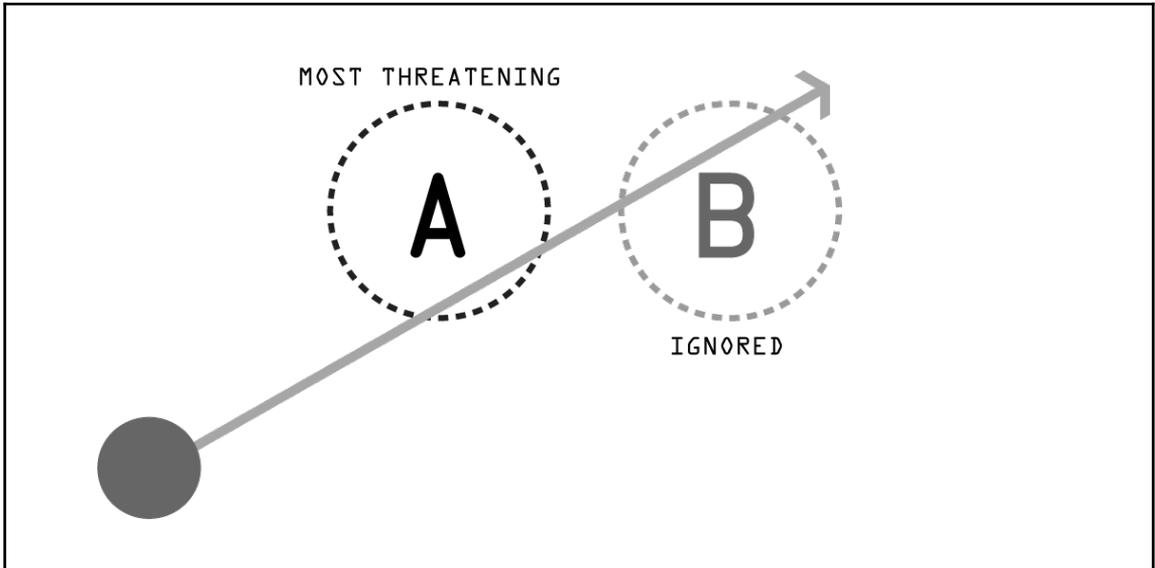
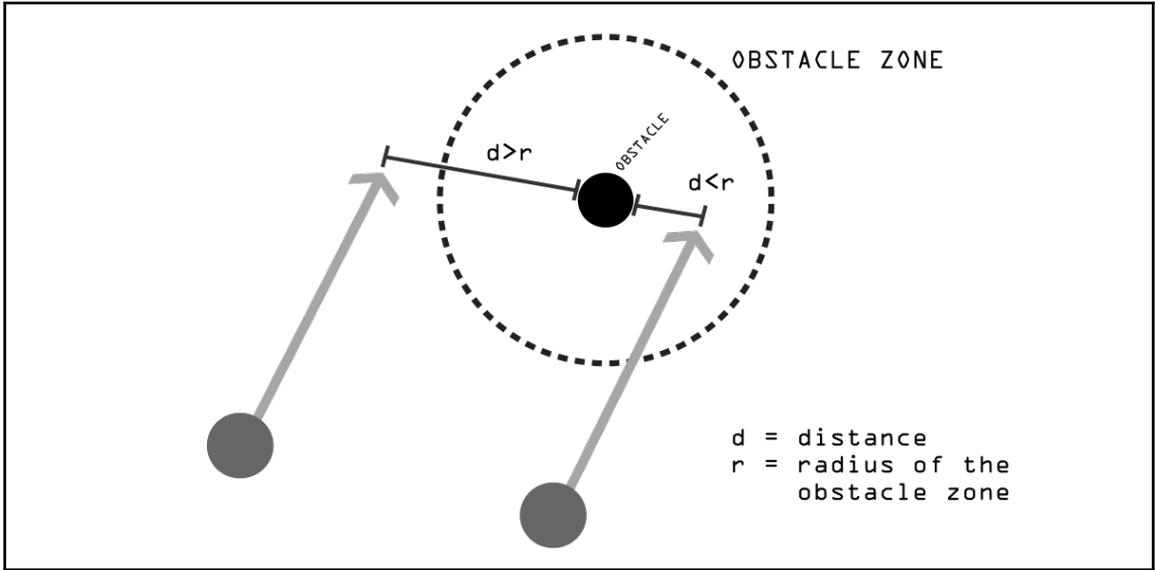


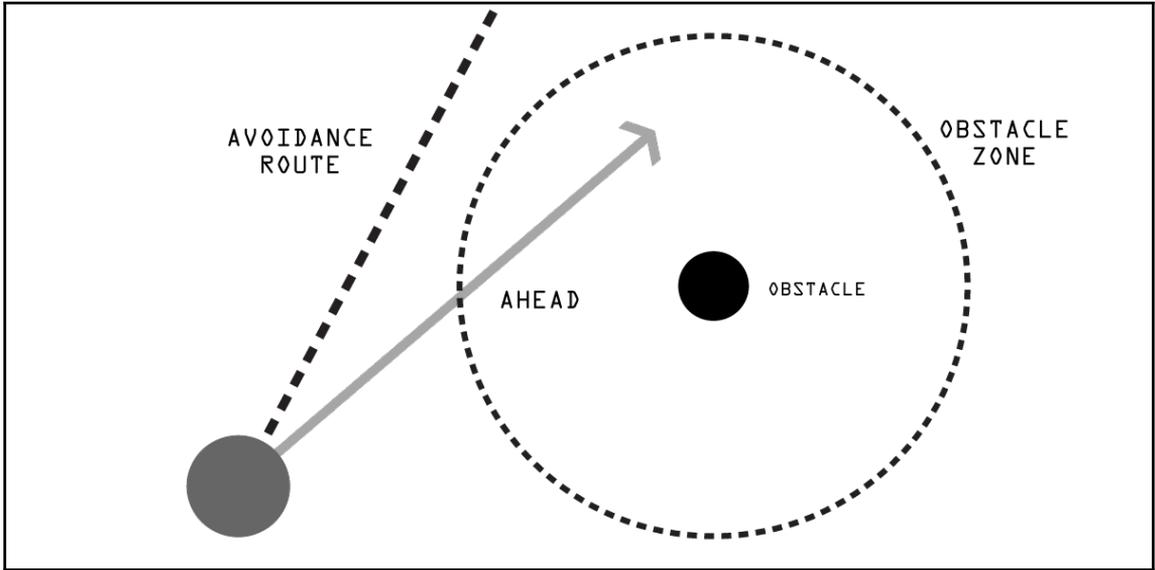












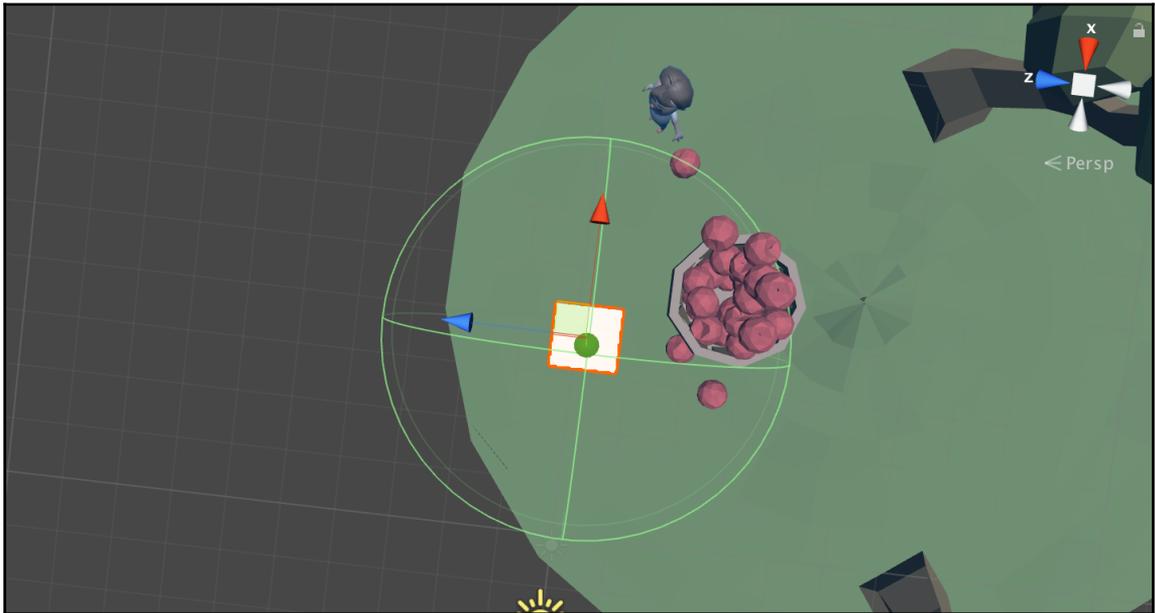
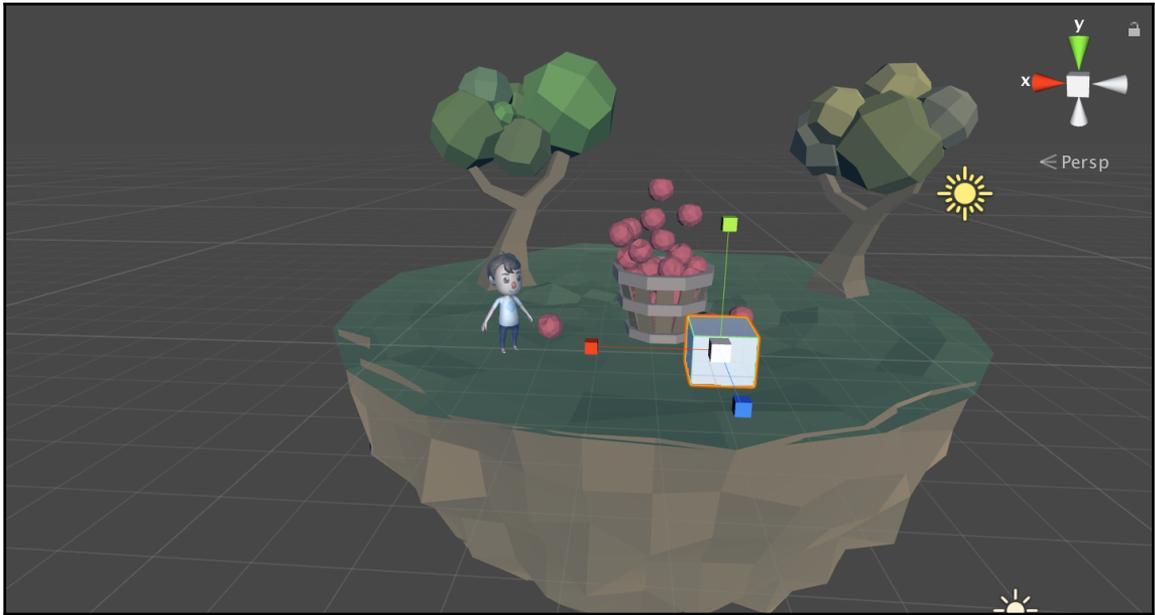
Chapter 10: Awareness





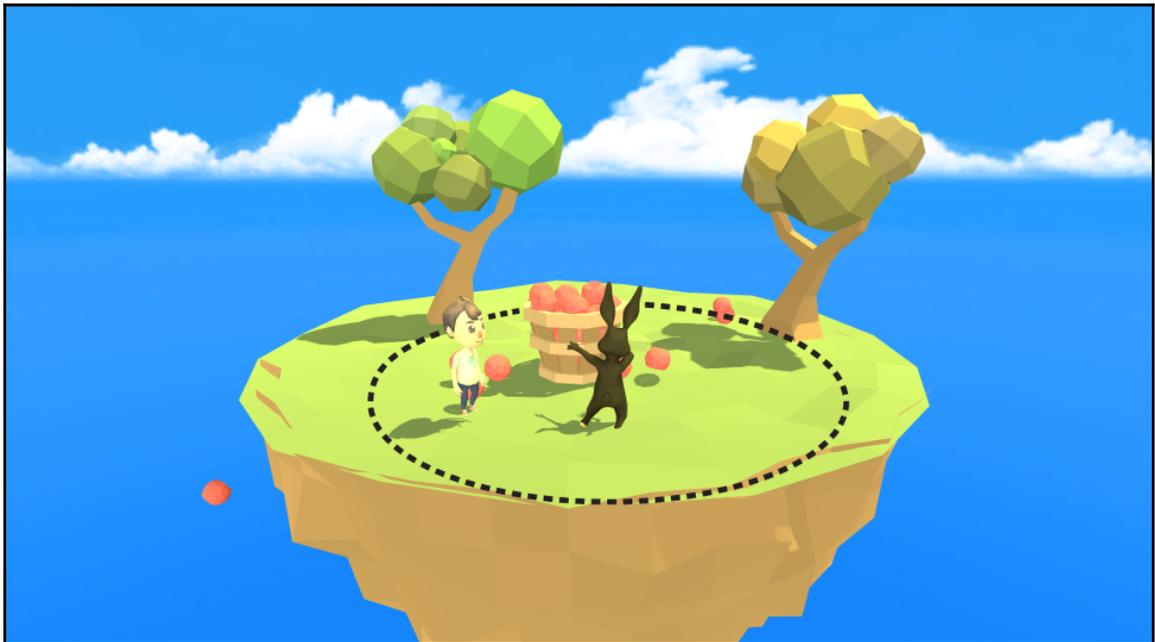








 Player Detected



▼ Sphere Collider



Edit Collider

Is Trigger



Material

None (Physic Material)

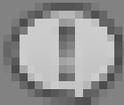
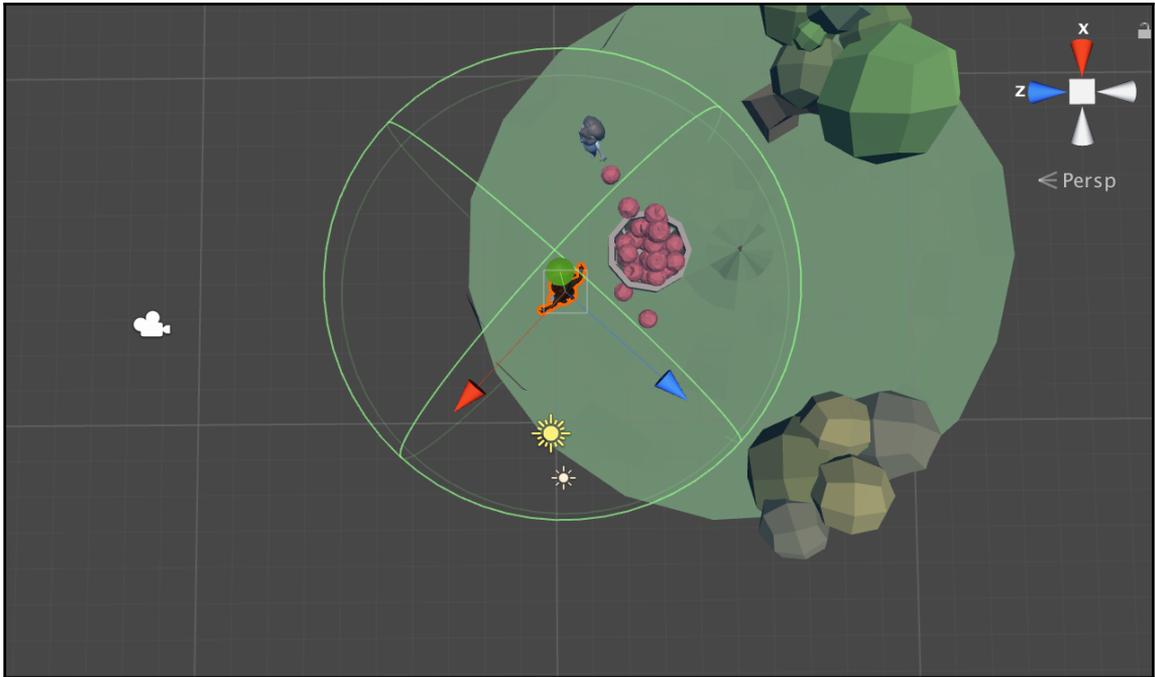


Center

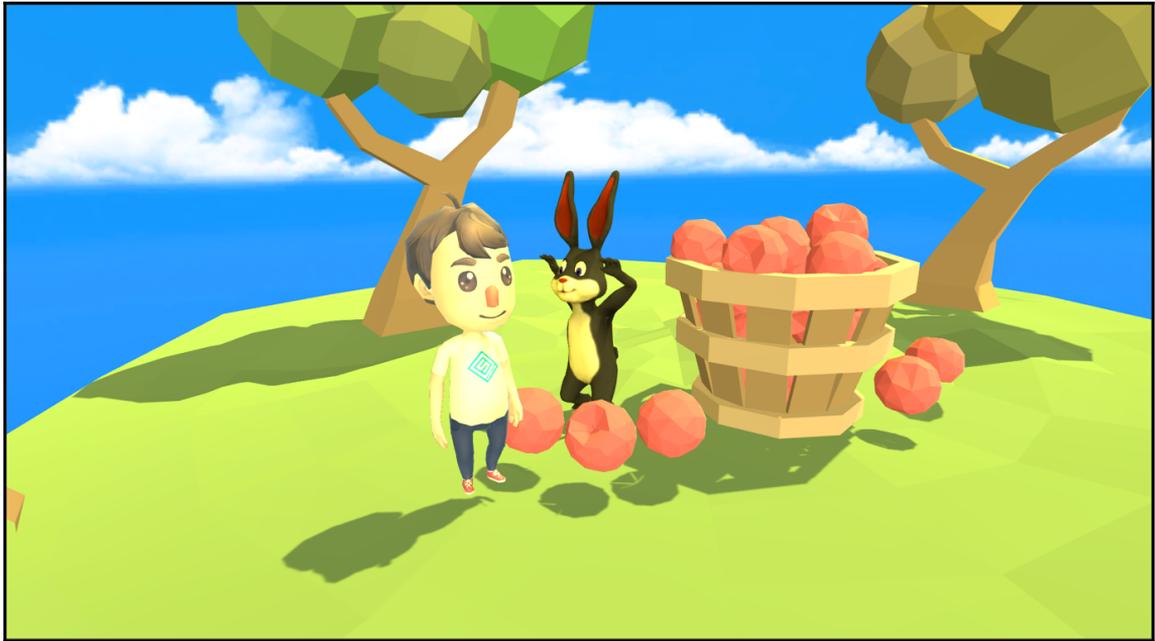
X Y Z

Radius

Add Component



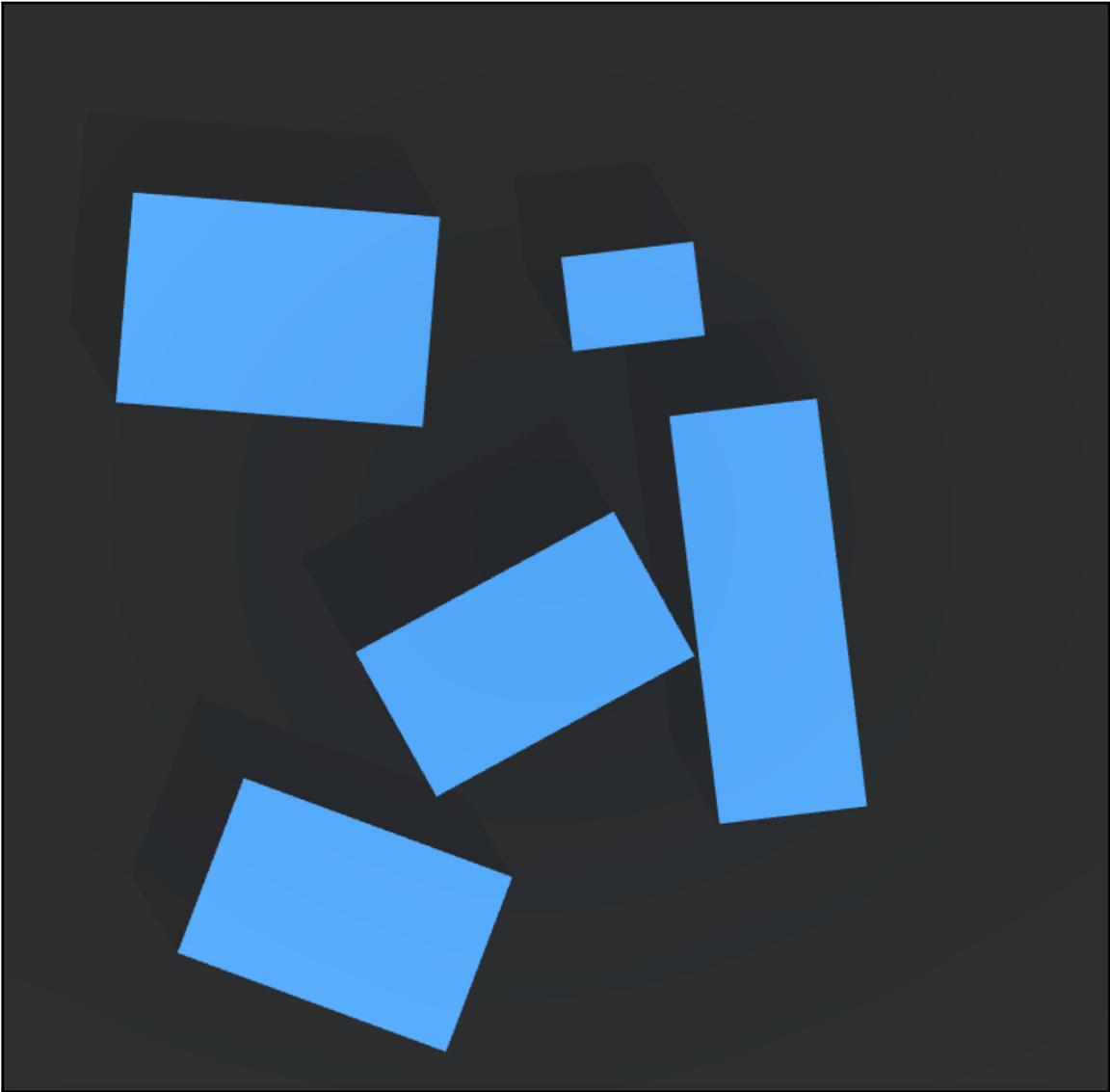
I can see the player

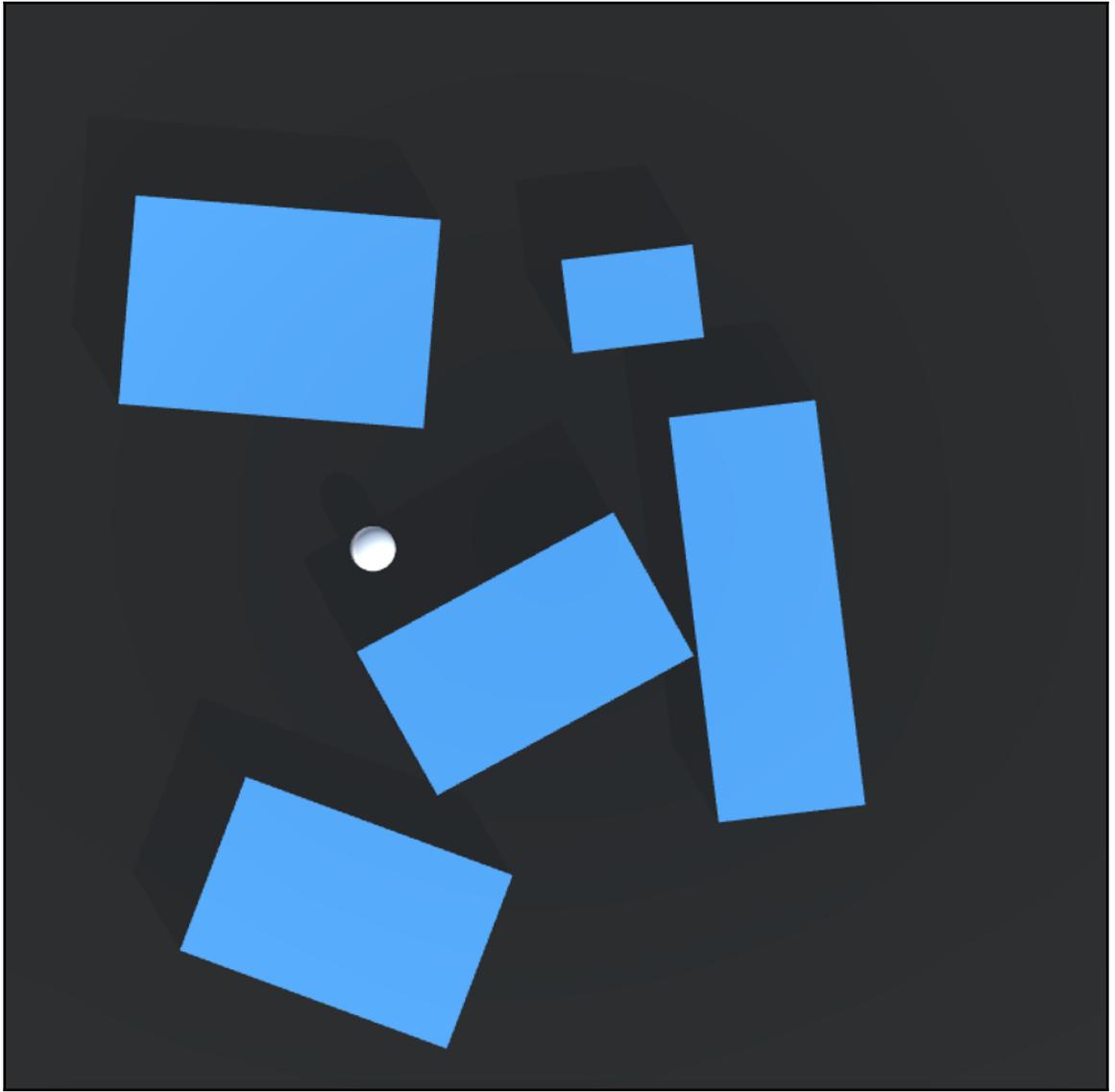


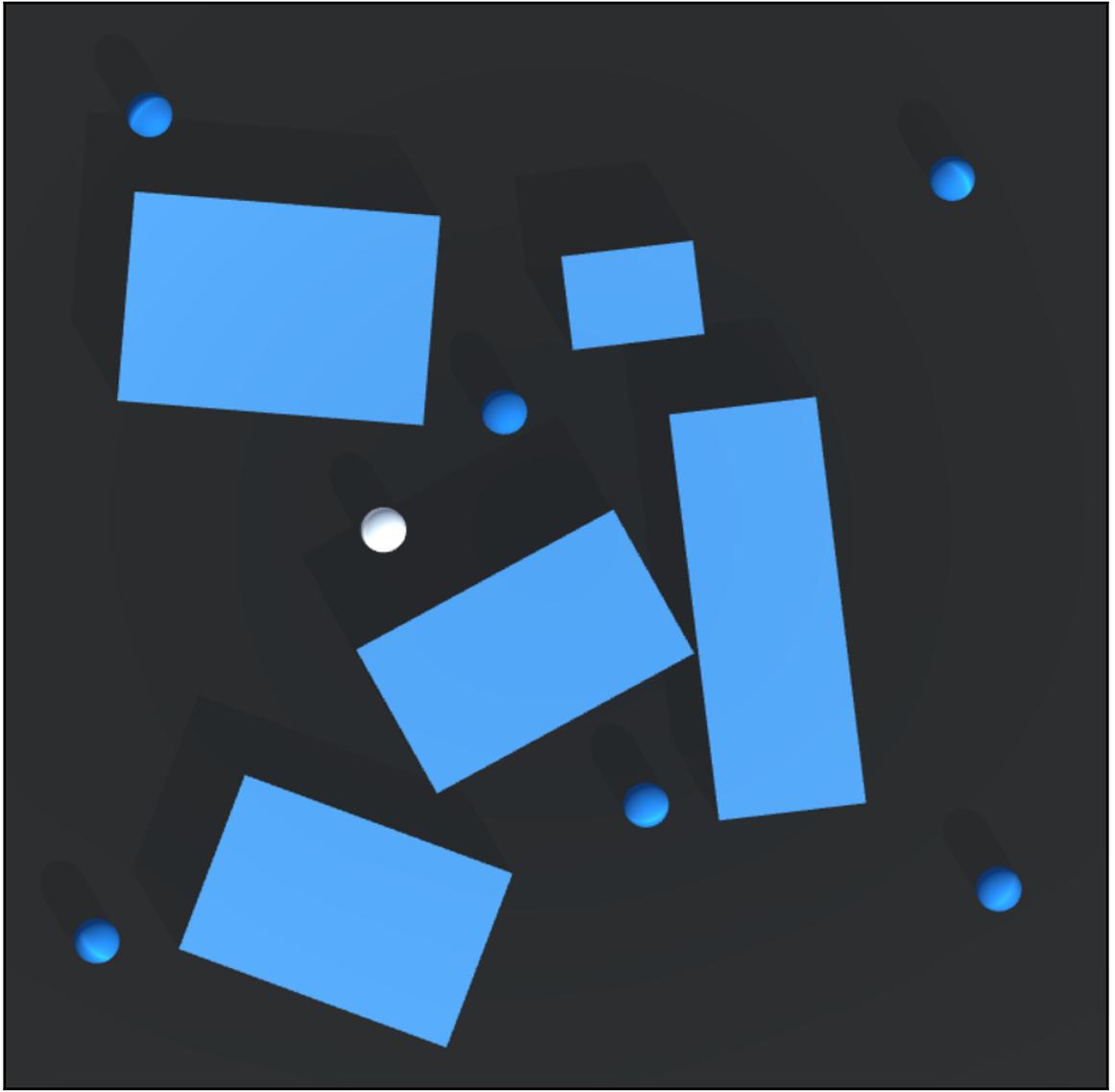
- ! I can see the player
UnityEngine.Debug:Log(Object) 1
- ! I can see the player
UnityEngine.Debug:Log(Object) 233
- ! I've lost the player
UnityEngine.Debug:Log(Object) 1













Inspector

Tags & Layers

- ▶ Tags
- ▶ Sorting Layers
- ▼ Layers

Builtin Layer 0	Default
Builtin Layer 1	TransparentFX
Builtin Layer 2	Ignore Raycast
Builtin Layer 3	
Builtin Layer 4	Water
Builtin Layer 5	UI
Builtin Layer 6	
Builtin Layer 7	
User Layer 8	Obstacles
User Layer 9	Targets
User Layer 10	
User Layer 11	
User Layer 12	
User Layer 13	
User Layer 14	
User Layer 15	
User Layer 16	

Default

TransparentFX

Ignore Raycast

Water

UI

✓ **Obstacles**

Targets

Add Layer...

 **Rigidbody**  

Mass

Drag

Angular Drag

Use Gravity

Is Kinematic

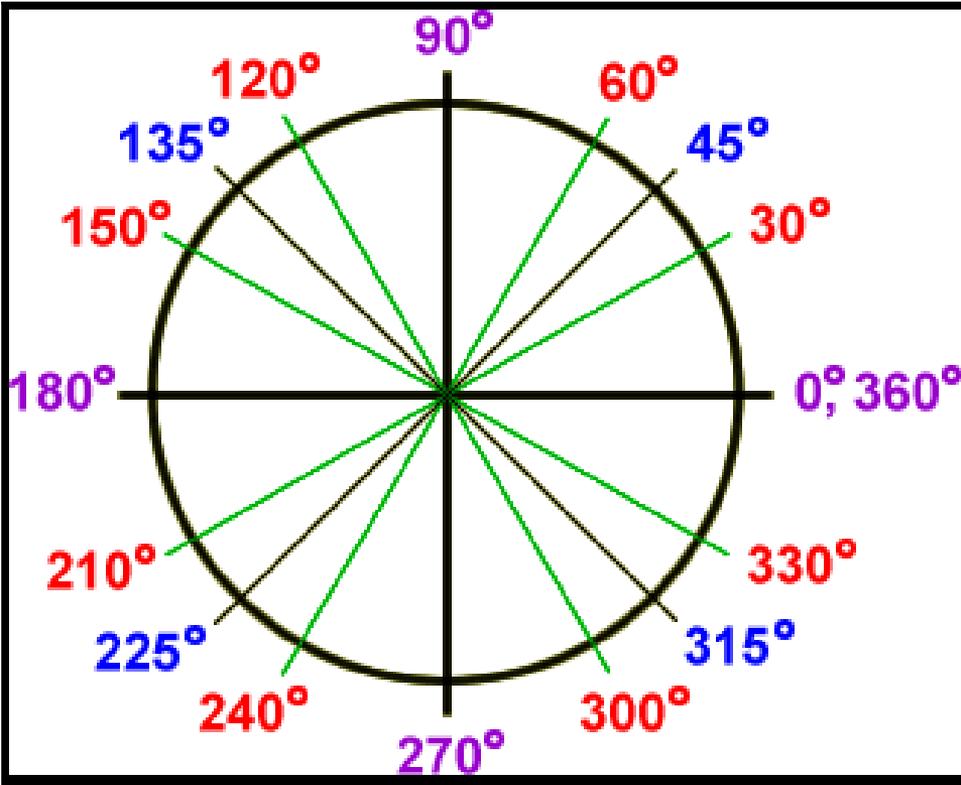
Interpolate

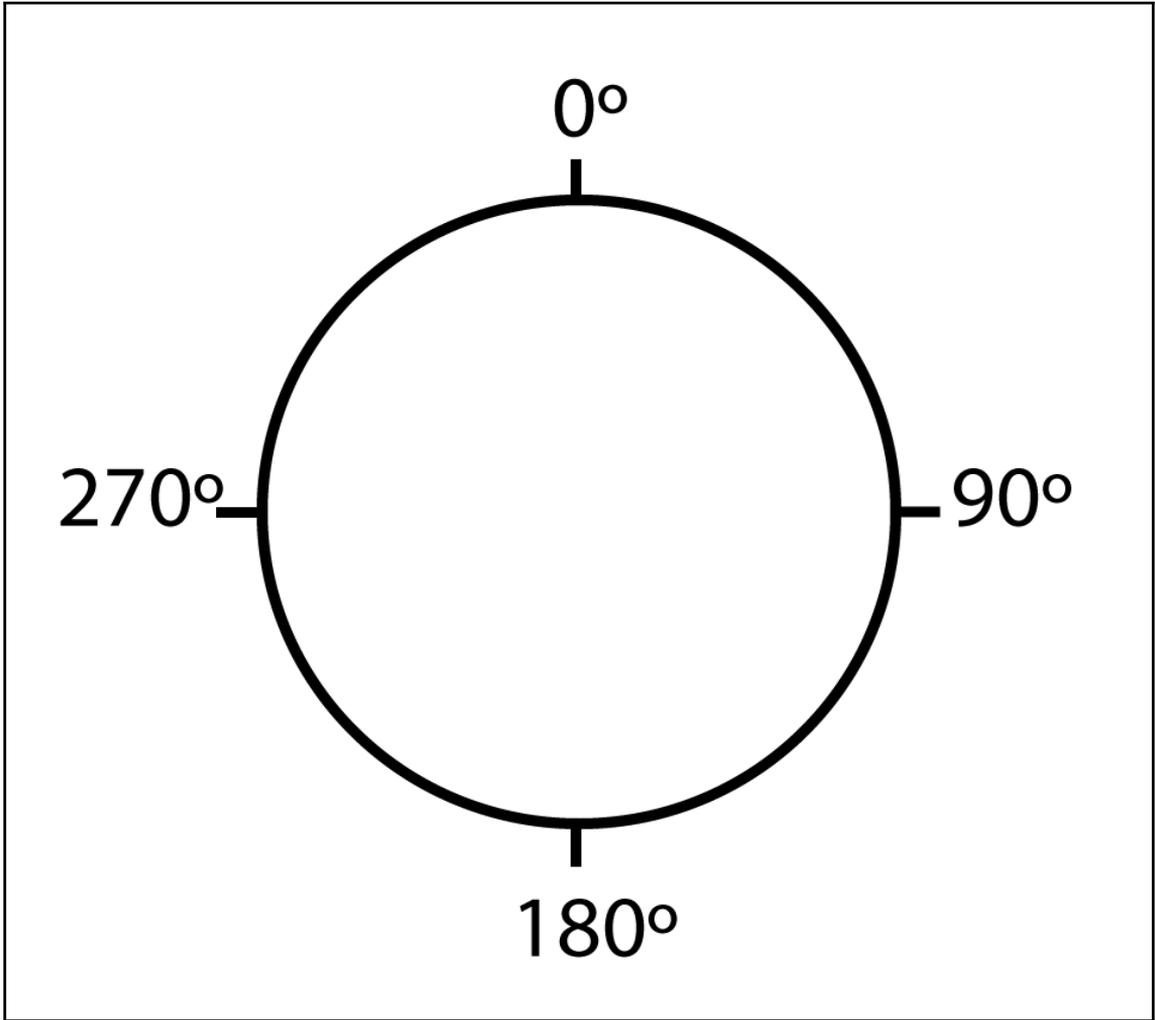
Collision Detection

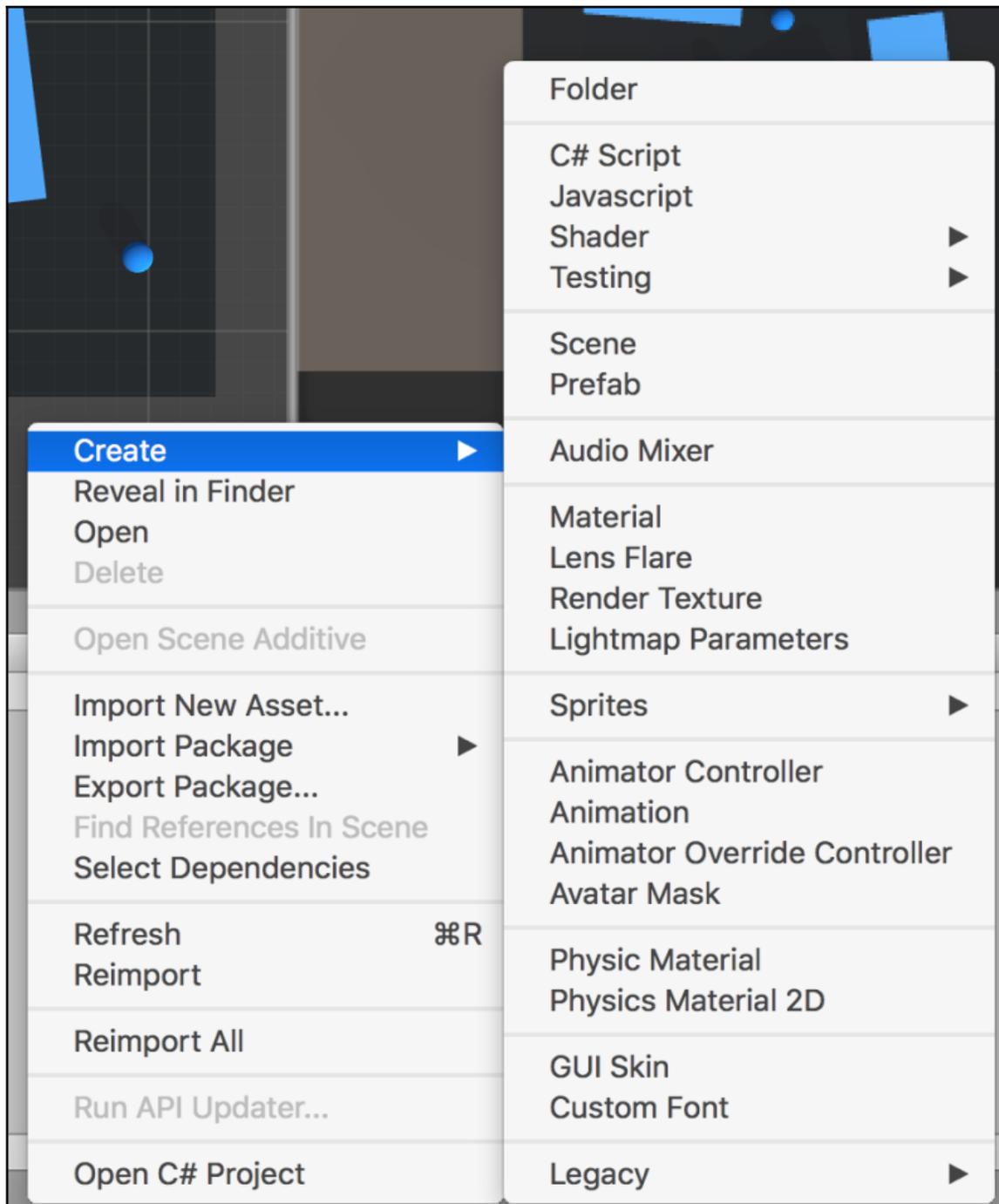
Constraints

Freeze Position X Y Z

Freeze Rotation X Y Z







Folder

C# Script

Javascript

Shader ▶

Testing ▶

Scene

Prefab

Audio Mixer

Material

Lens Flare

Render Texture

Lightmap Parameters

Sprites ▶

Animator Controller

Animation

Animator Override Controller

Avatar Mask

Physic Material

Physics Material 2D

GUI Skin

Custom Font

Legacy ▶

Create ▶

Reveal in Finder

Open

Delete

Open Scene Additive

Import New Asset...

Import Package ▶

Export Package...

Find References In Scene

Select Dependencies

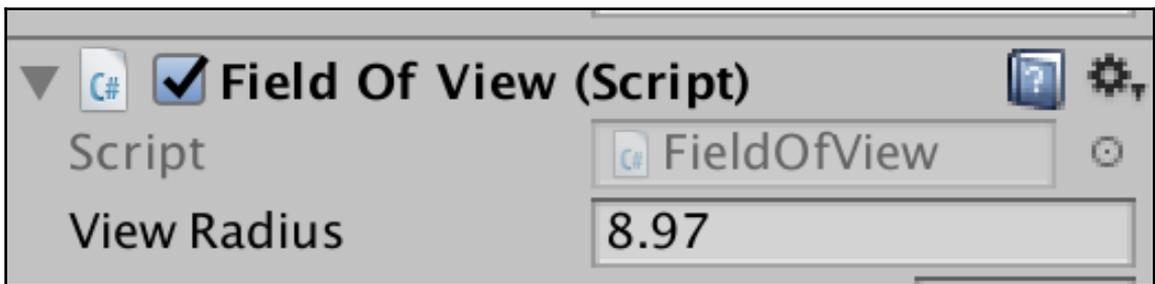
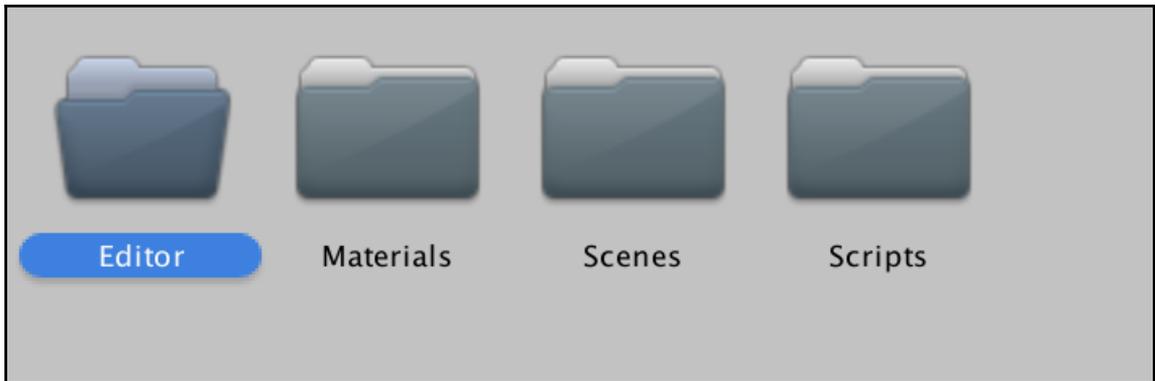
Refresh ⌘R

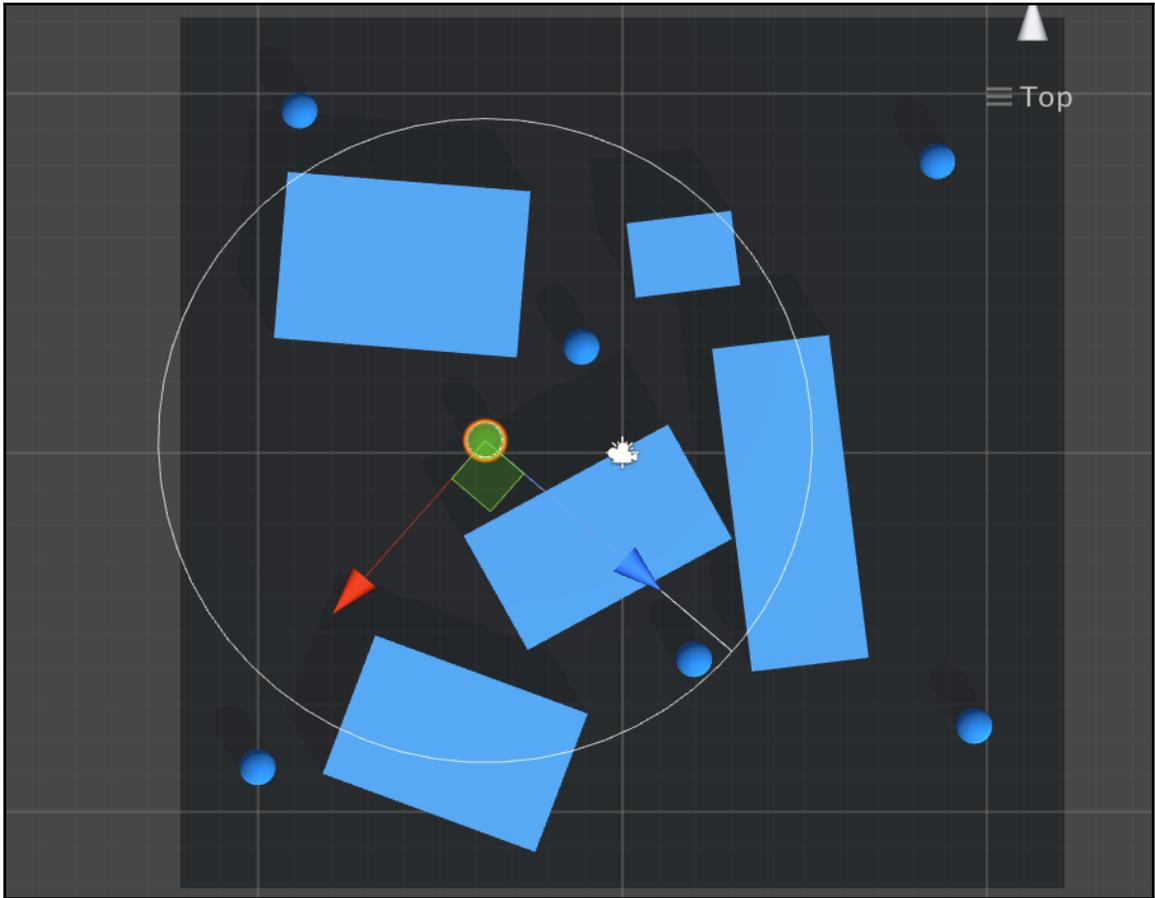
Reimport

Reimport All

Run API Updater...

Open C# Project

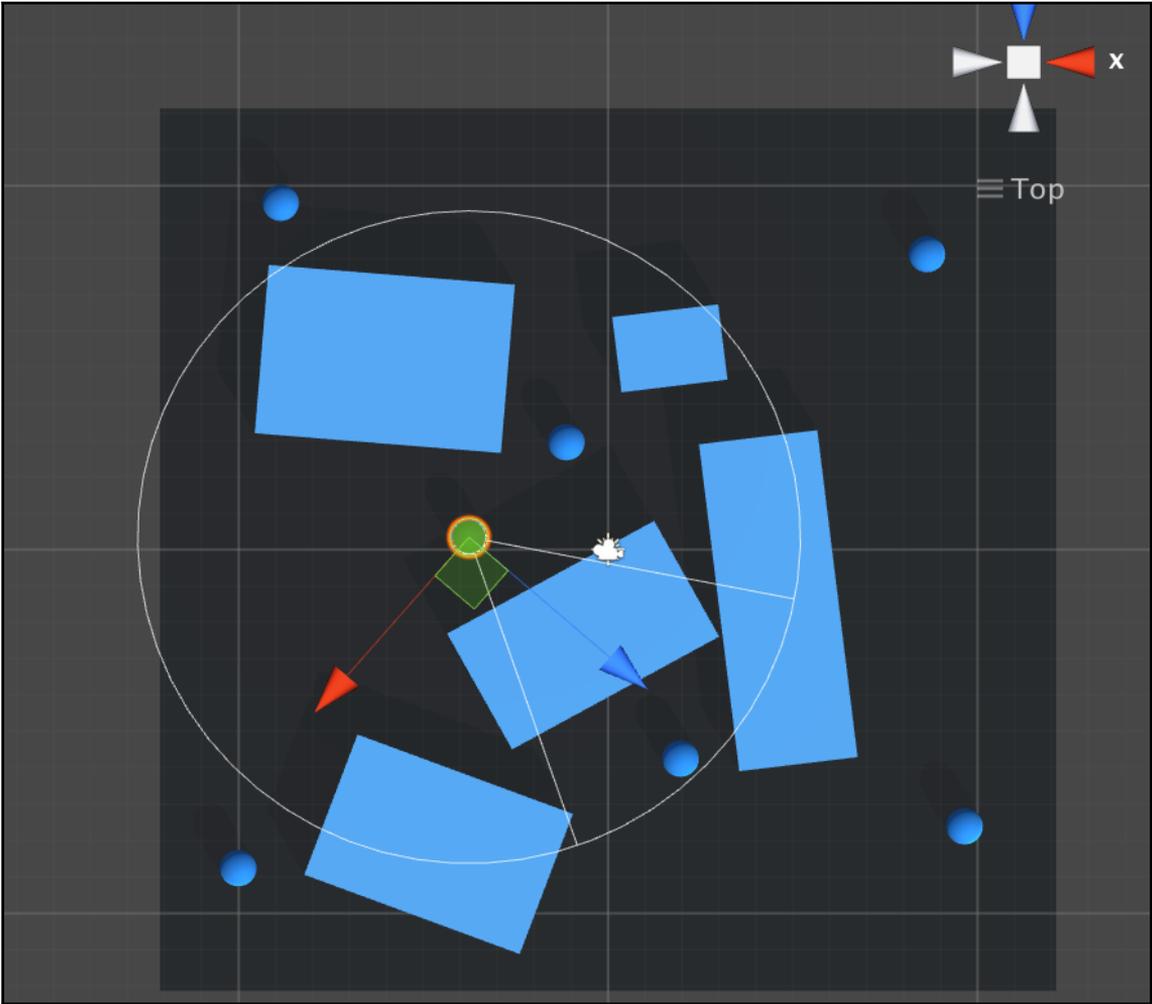


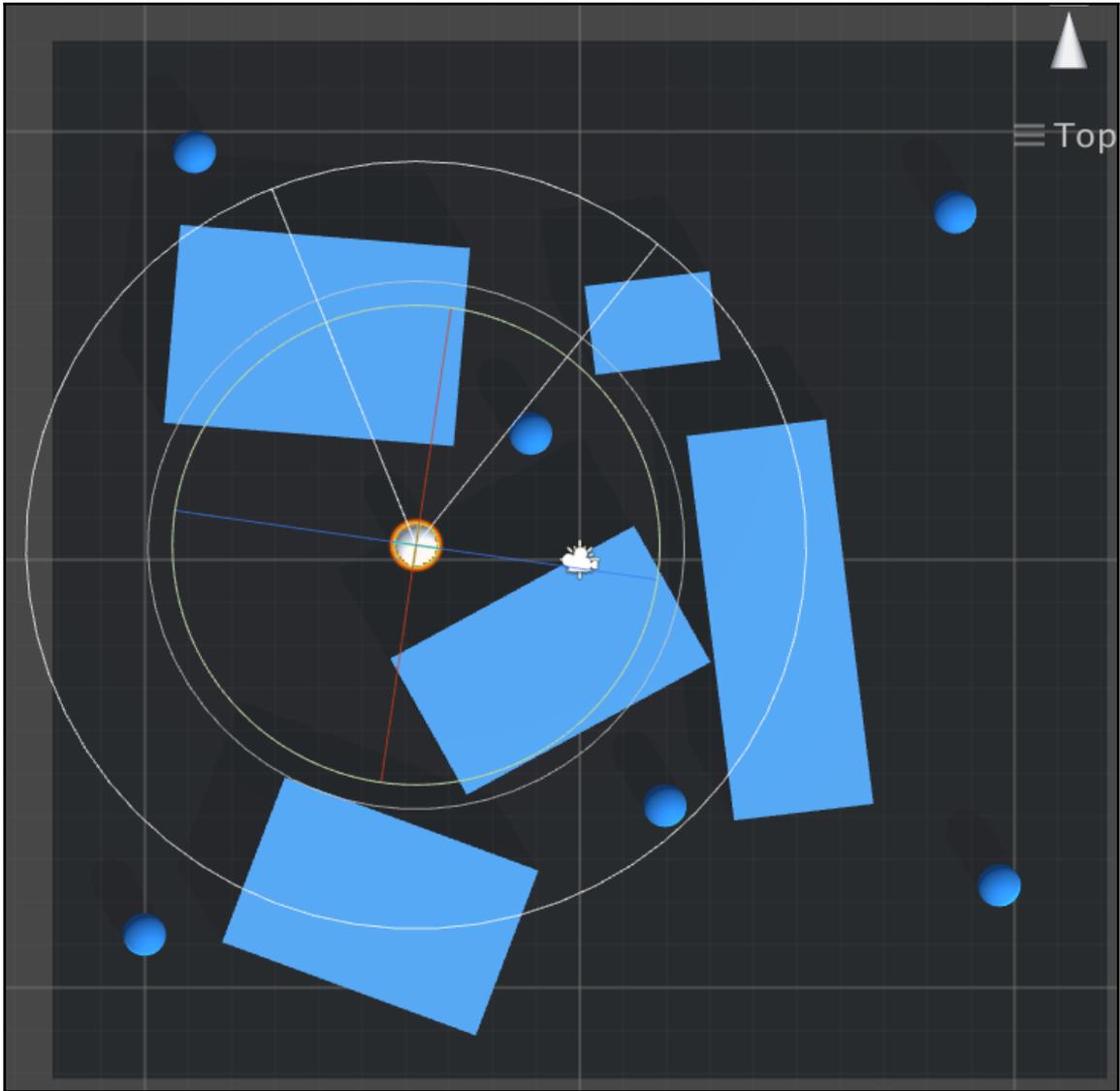


Script FieldOfView

View Radius

View Angle





▼ Obstacles

Cube

Cube (1)

Cube (2)

Cube (3)

Cube (4)

Default

TransparentFX

Ignore Raycast

Water

UI

✓ **Obstacles**

Targets

Add Layer...

▼ Targets

Target

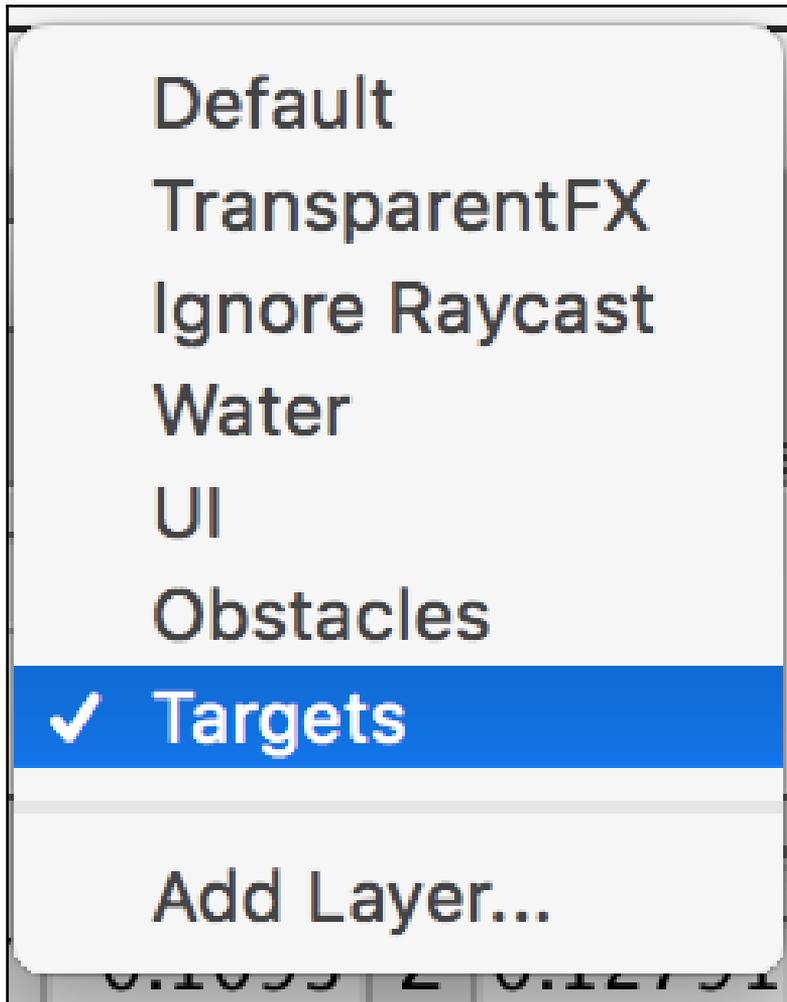
Target (1)

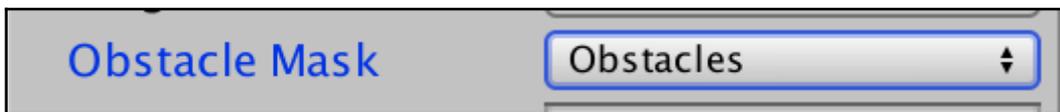
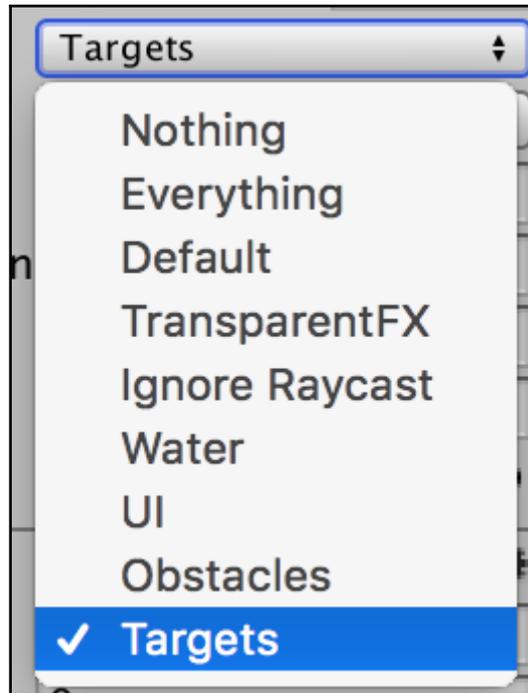
Target (2)

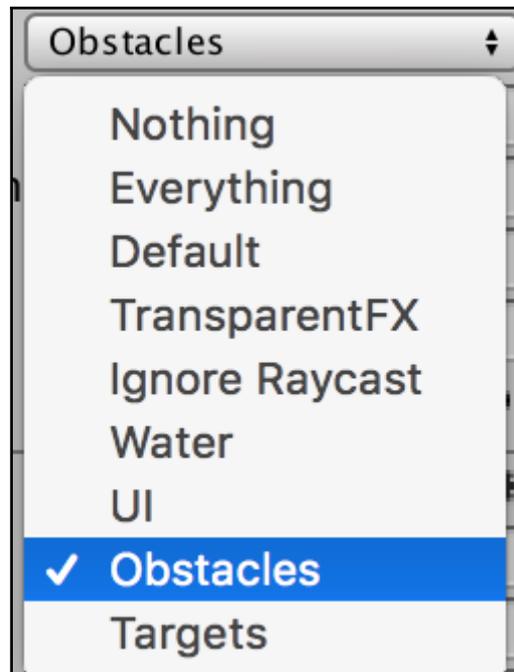
Target (3)

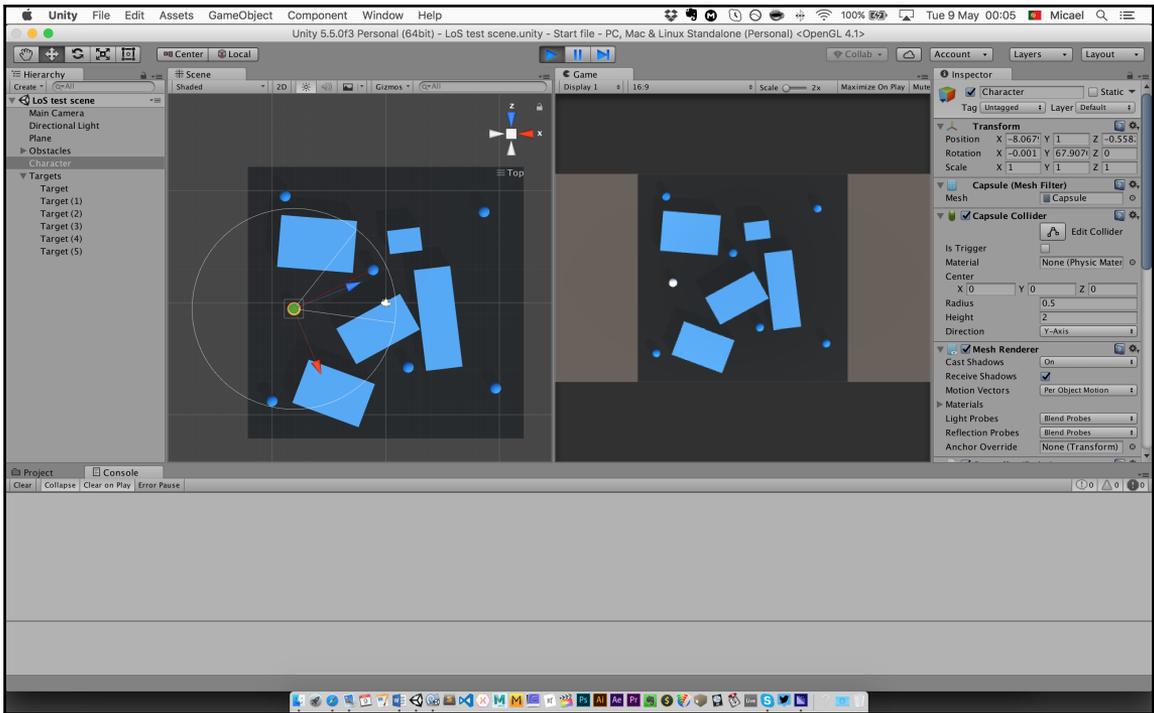
Target (4)

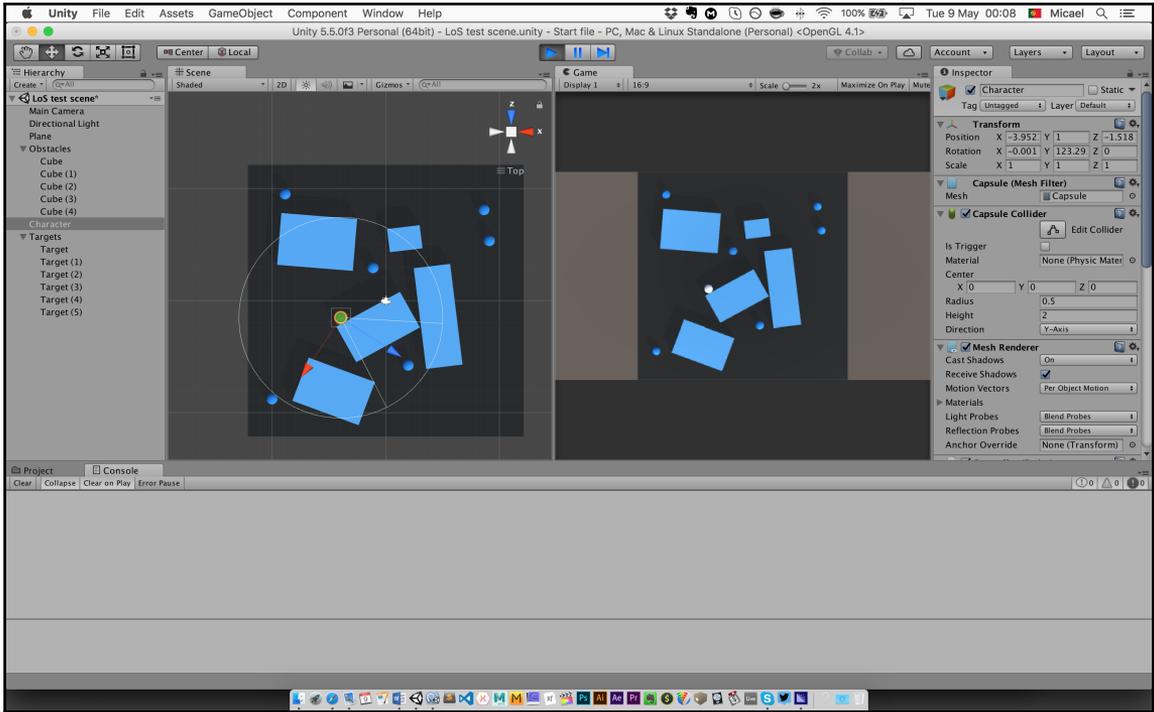
Target (5)

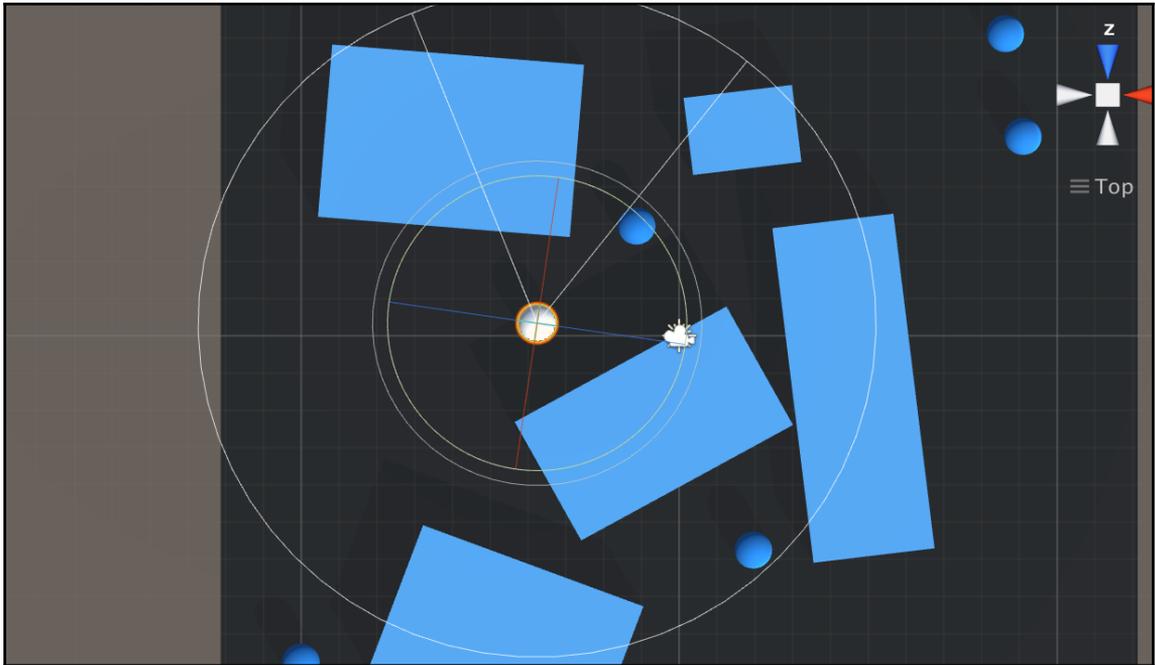












Field Of View (Script)

Script

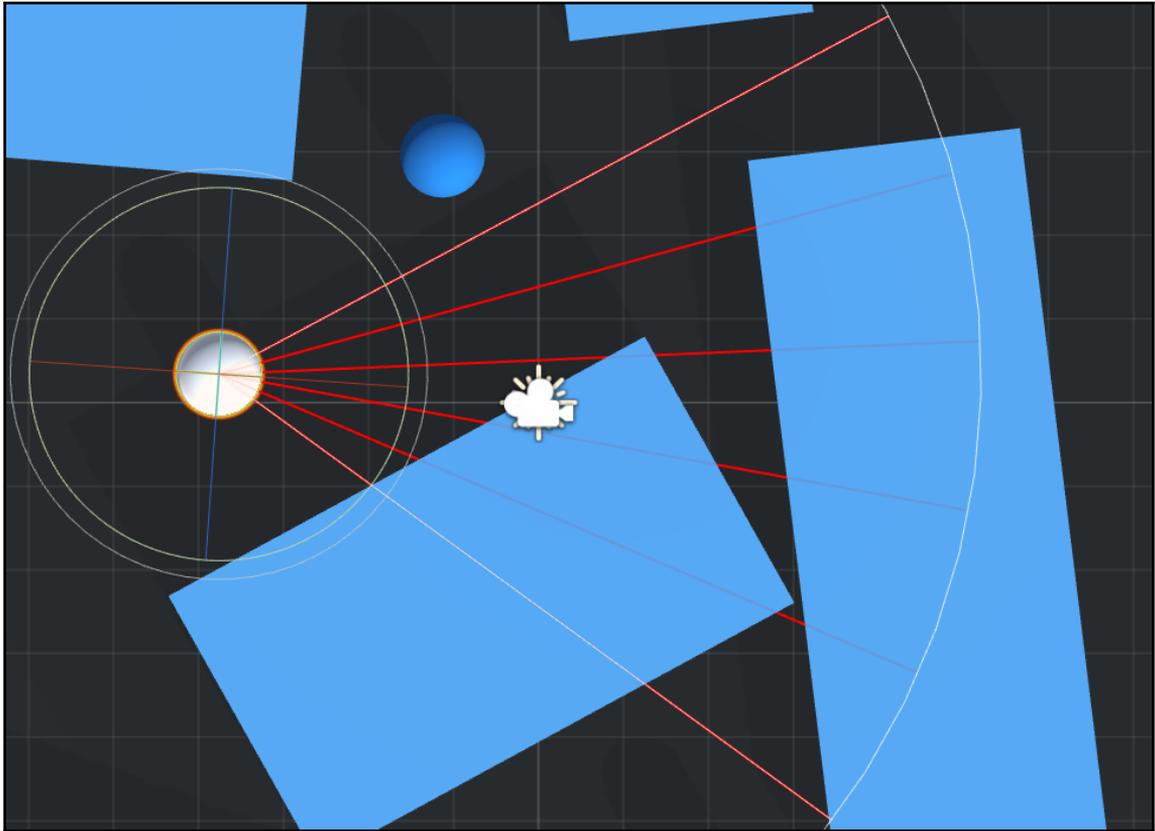
View Radius

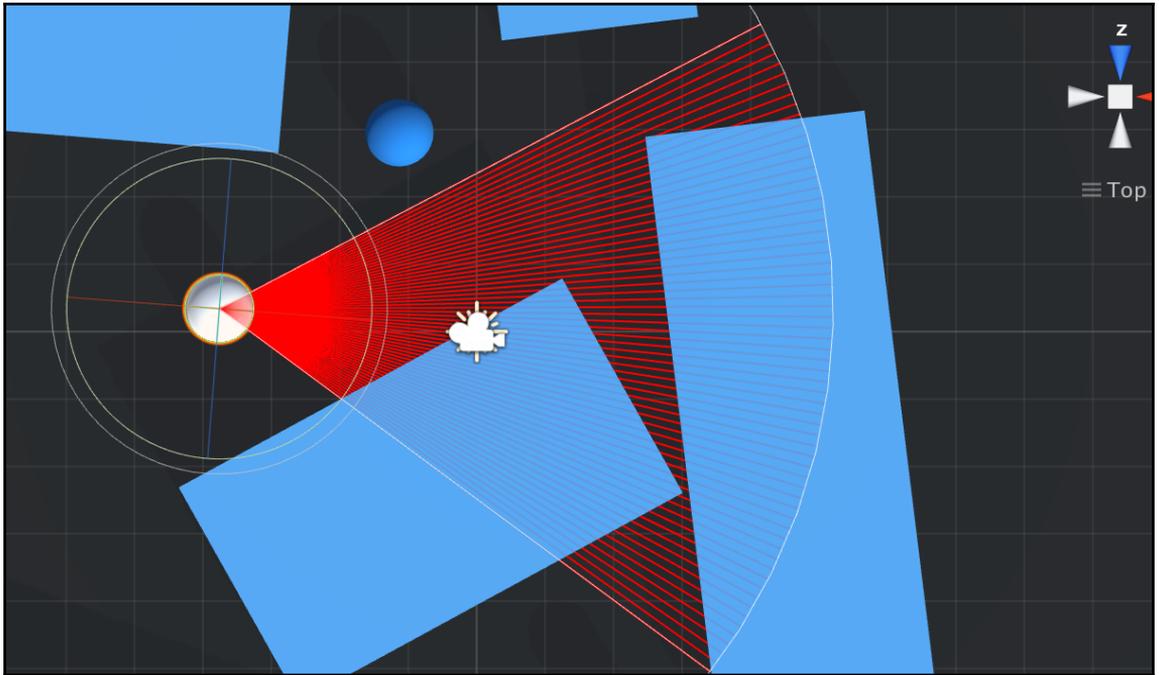
View Angle

Target Mask

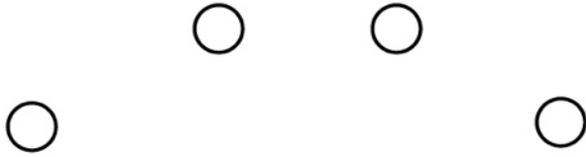
Obstacle Mask

Mesh Resolution

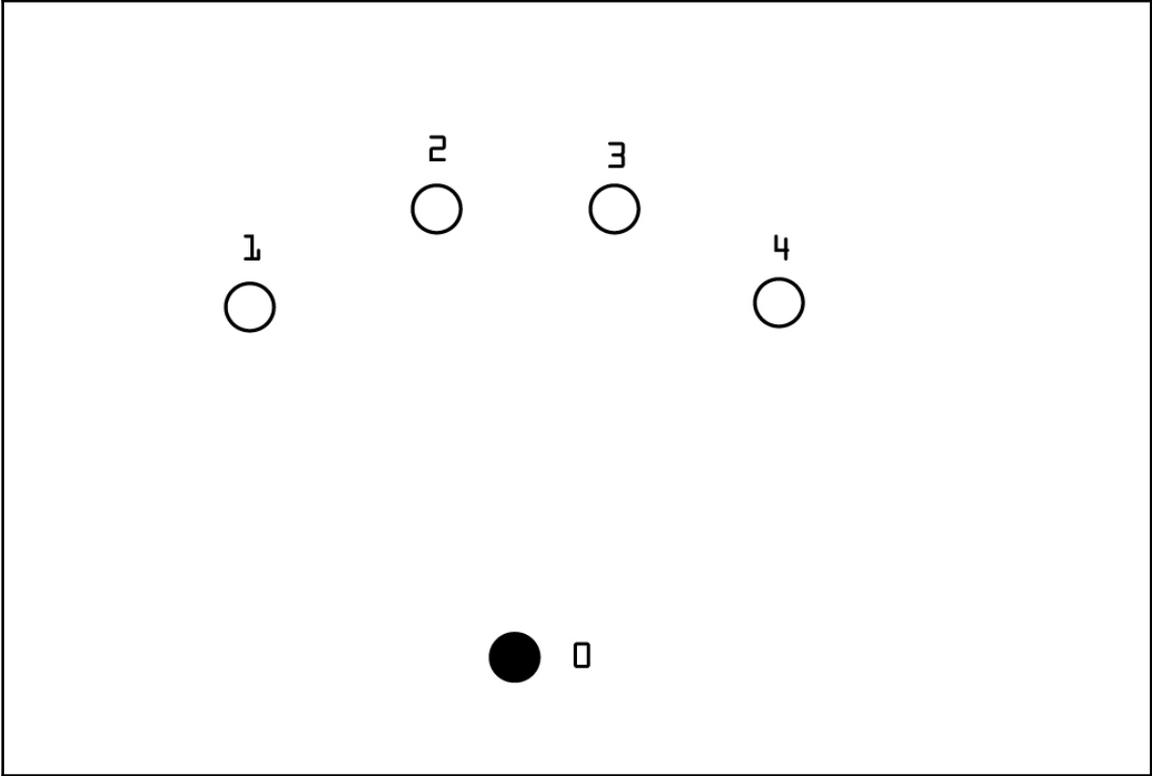


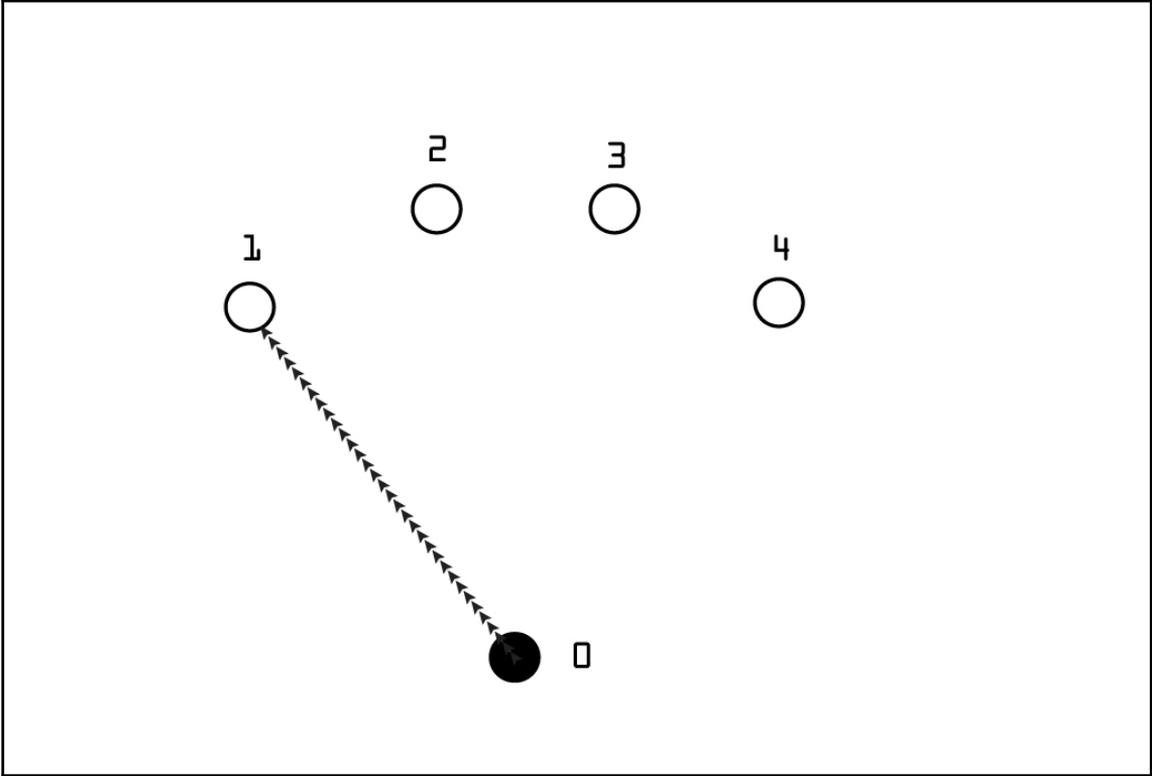


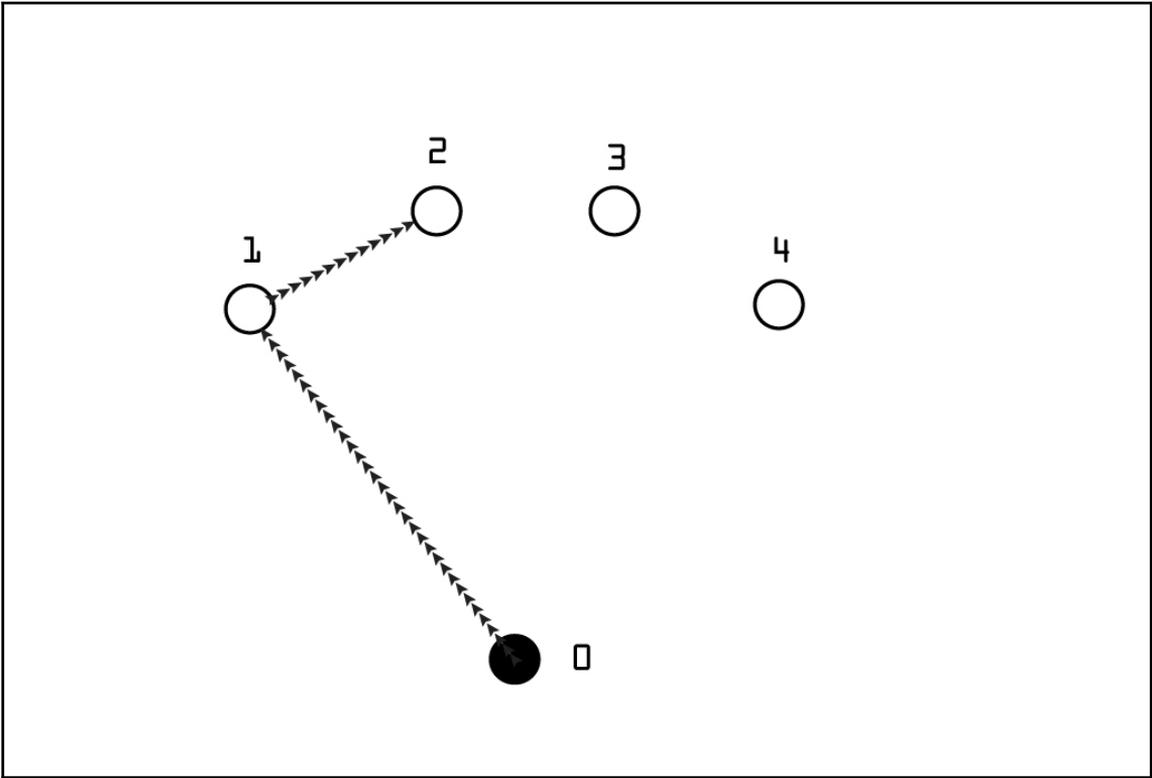
RAYCAST

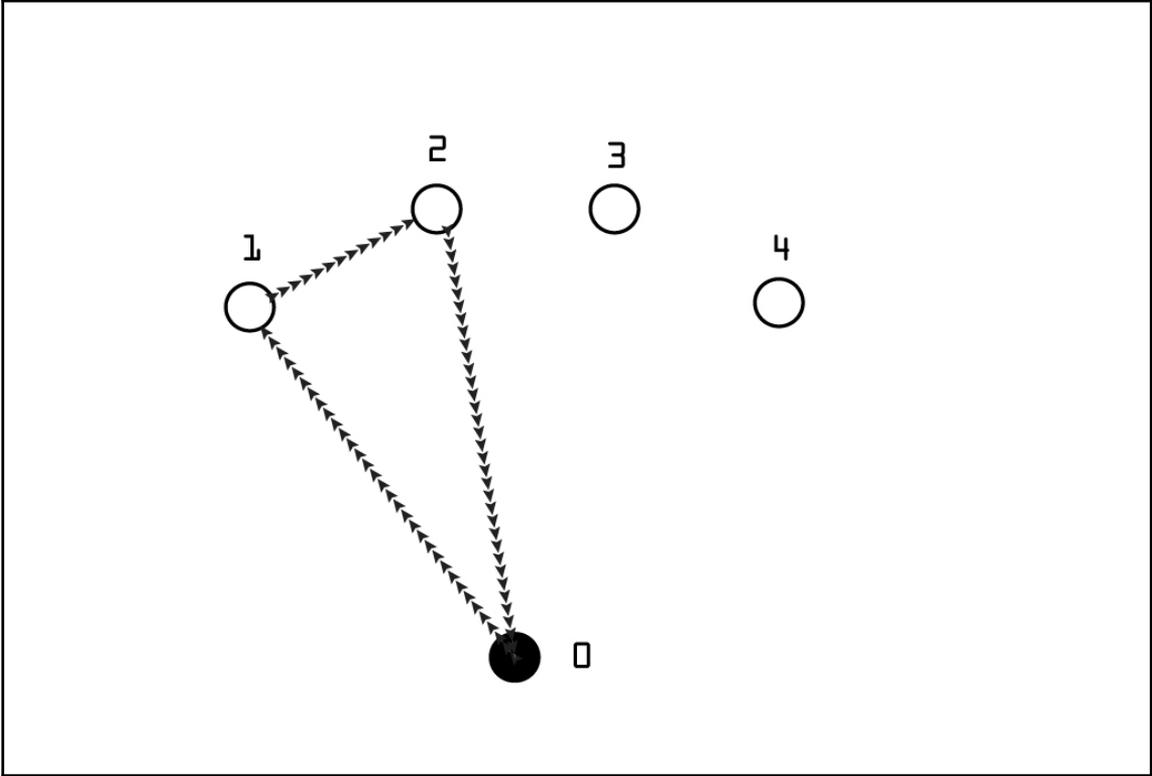


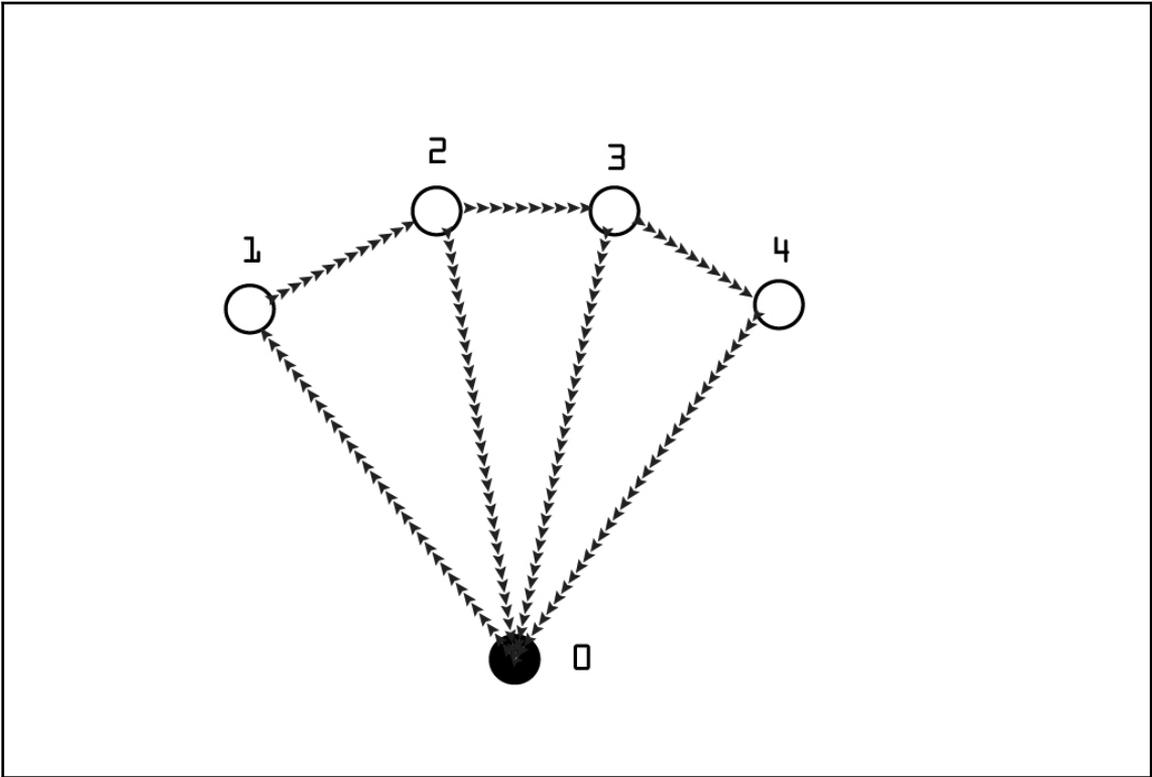
CHARACTER







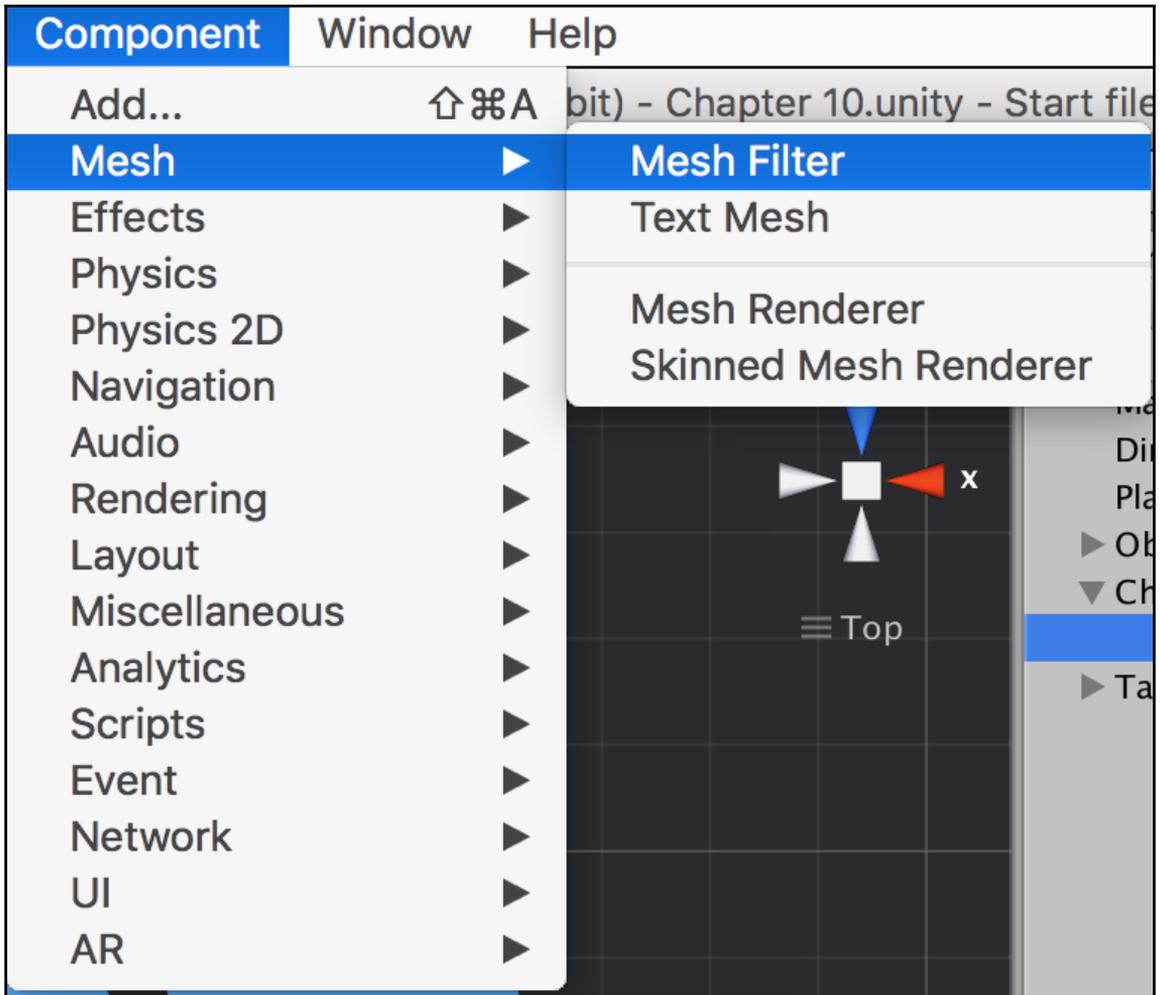


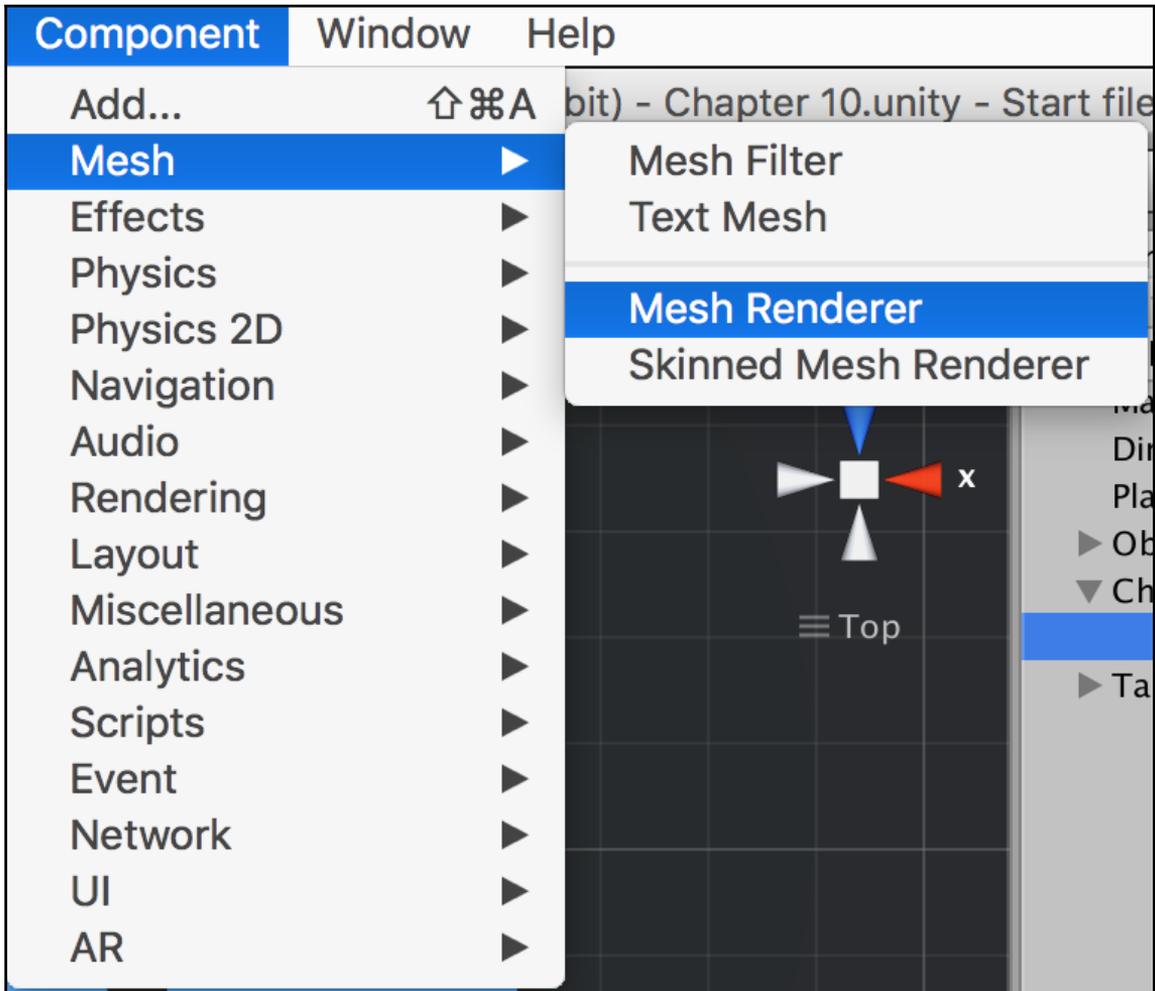


- Main Camera
- Directional Light
- Plane
- ▶ Obstacles
- Character
- ▶ Targets

GameObject	Component	Wi
Create Empty		⇧ ⌘ N
Create Empty Child		⇧ ⌘ N
3D Object		▶
2D Object		▶
Light		▶
Audio		▶
UI		▶
Particle System		
Camera		
Center On Children		

▼ Character
View Visualisation





▼  **Mesh Renderer**  

Cast Shadows

Receive Shadows

Motion Vectors

▶ **Materials**

Light Probes

Reflection Probes

Anchor Override 

▼  **Field Of View (Script)**  

Script 

View Radius

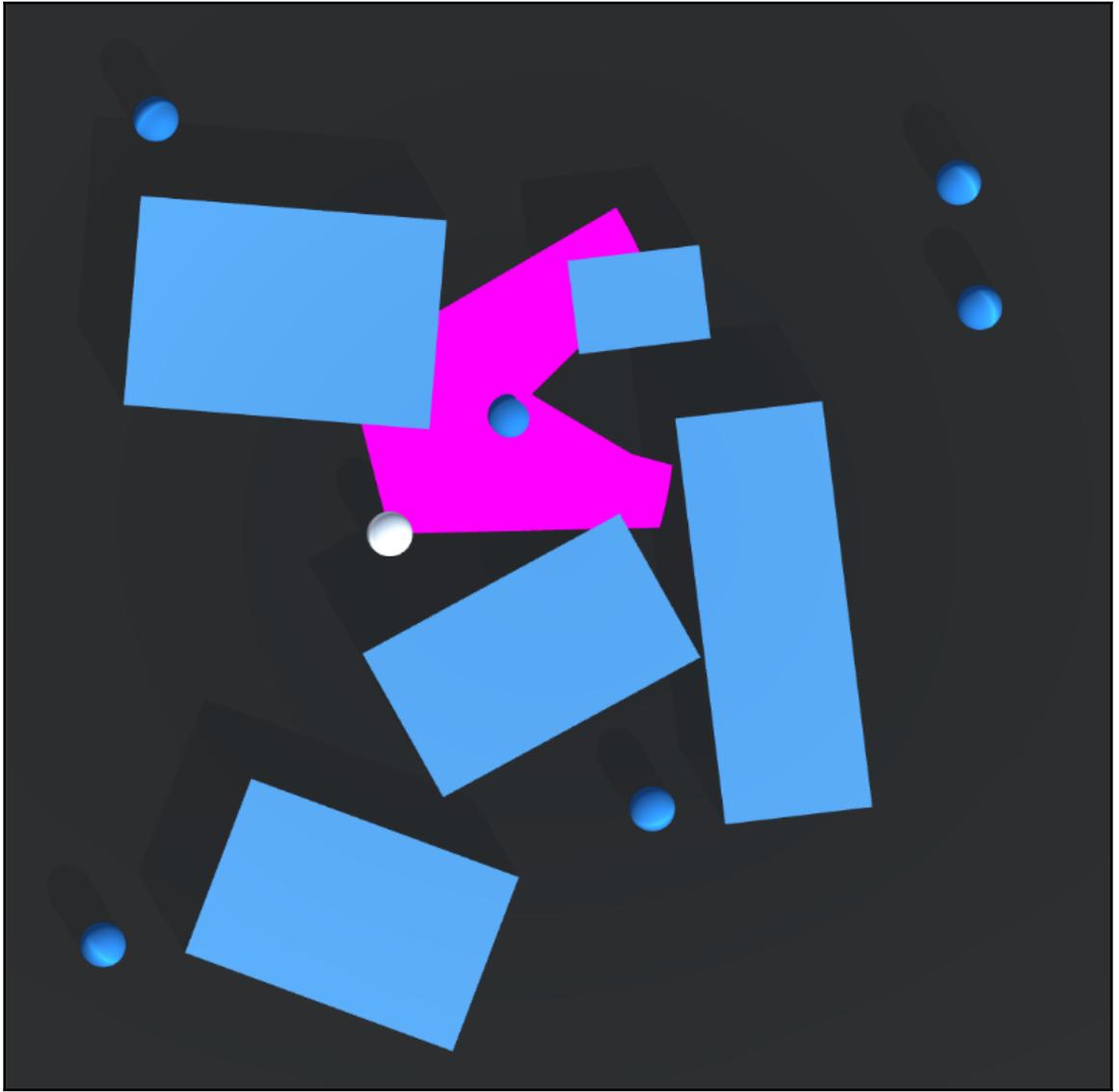
View Angle

Target Mask

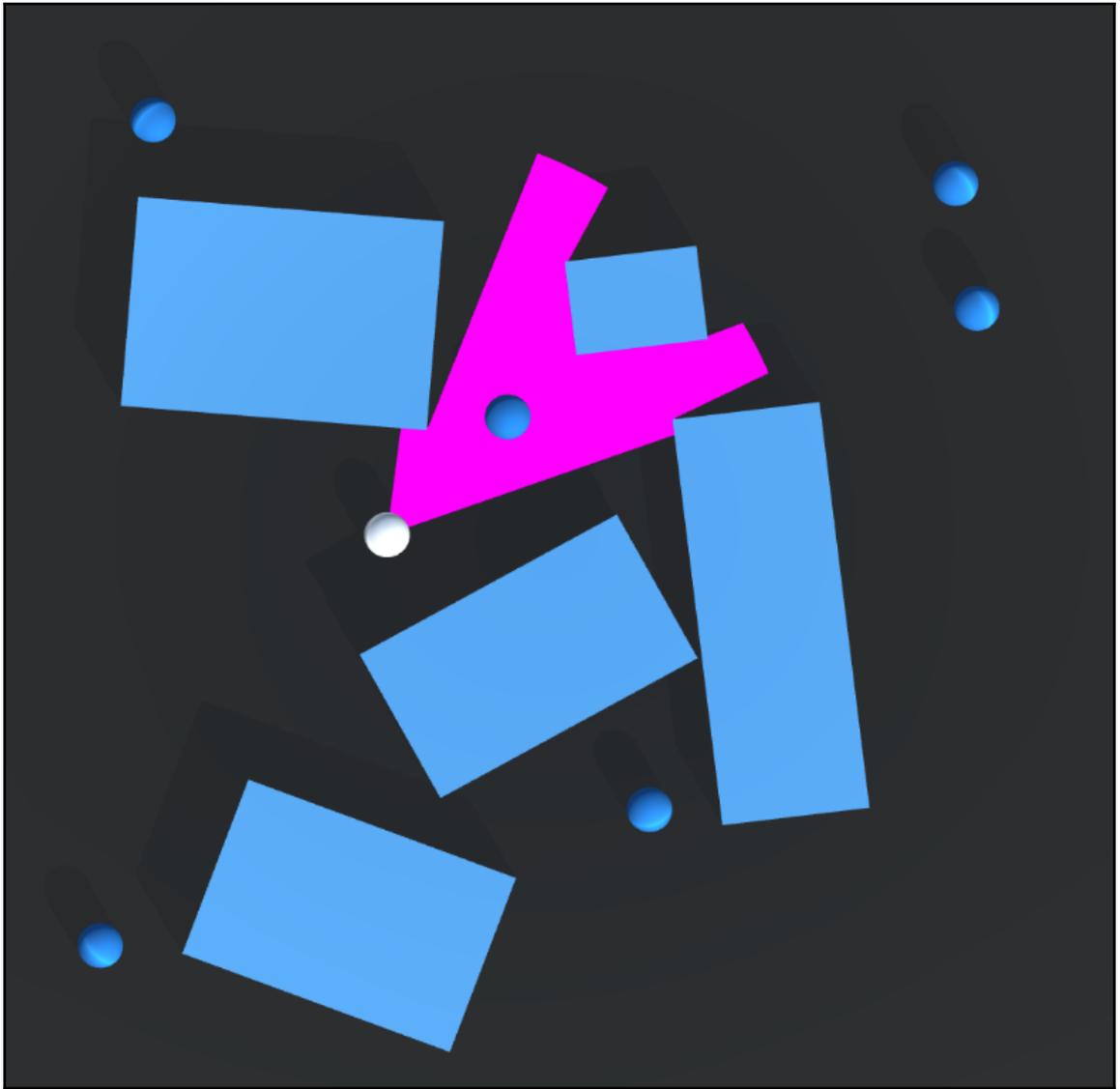
Obstacle Mask

Mesh Resolution

View Mesh Filter 







▼  **Field Of View (Script)**  

Script 

View Radius

View Angle 360

Target Mask 

Obstacle Mask 

Mesh Resolution

View Mesh Filter 

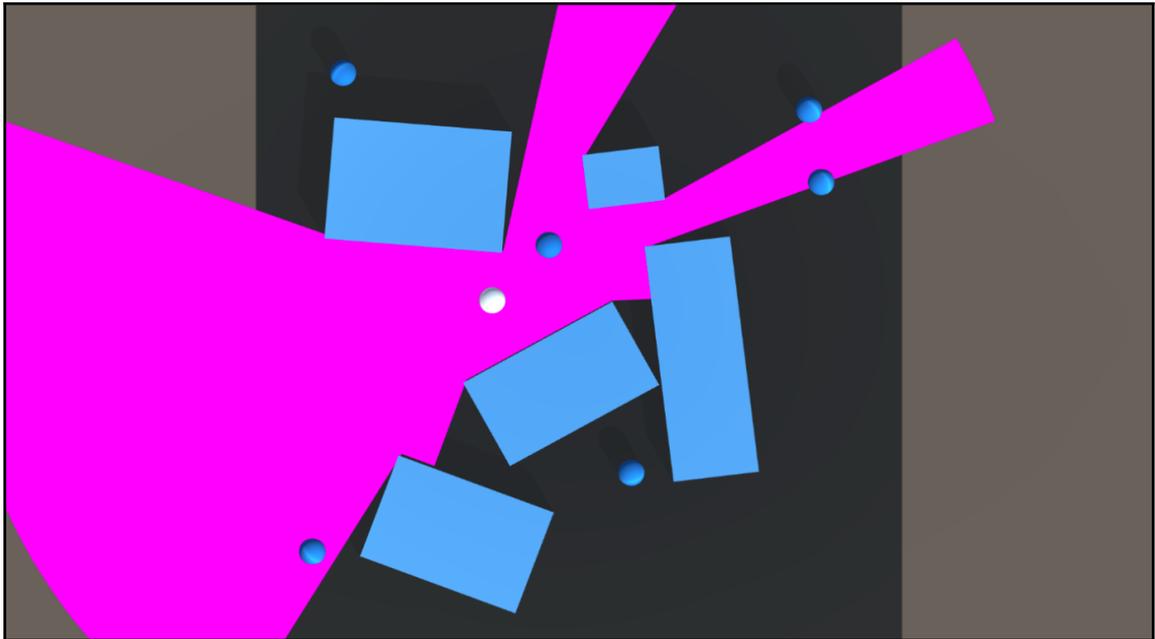




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