# UPBGE Collision



### Co-funded by the European Union



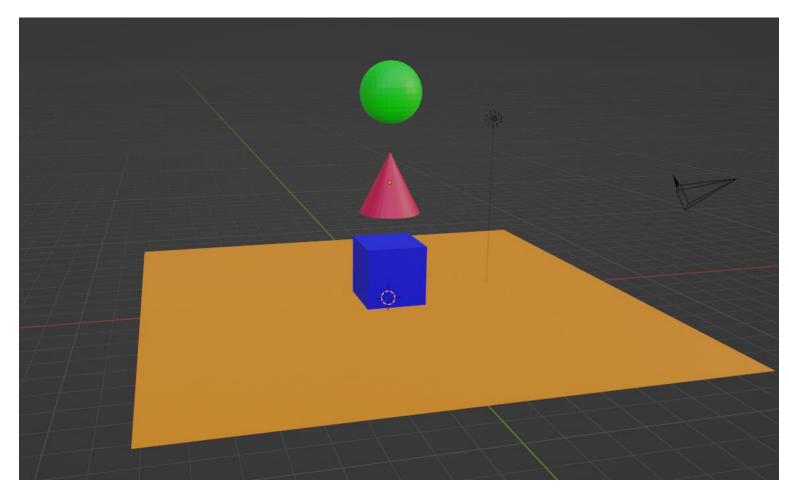
2024-1-PL01-KA220-VET-000243150

JACEK KAWAŁEK





# **CREATE FILE**



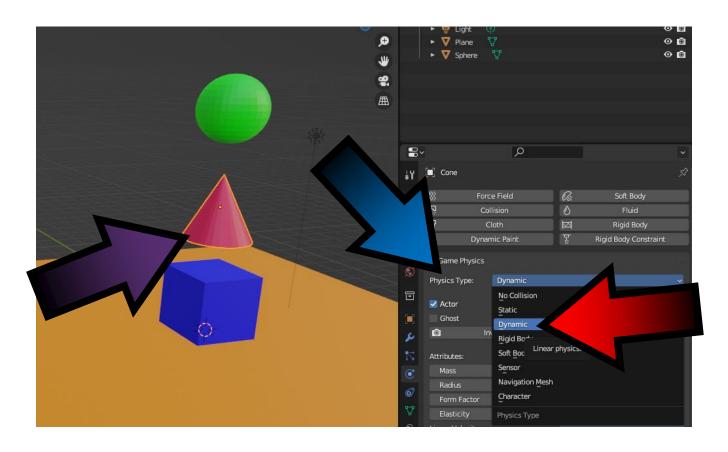








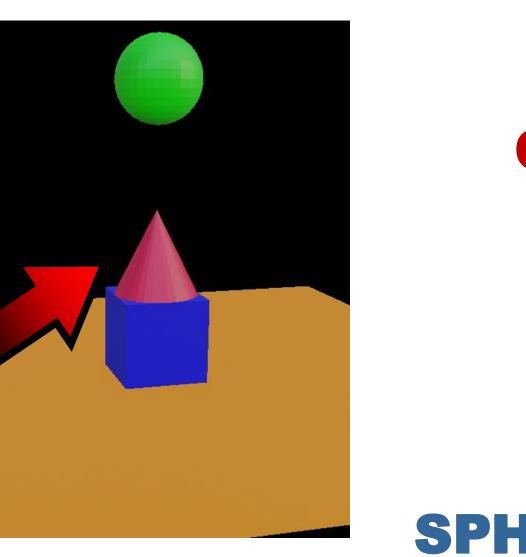
## MARK THE CONE



## FOR PHYSICS TYPE SELECT DYNAMIC







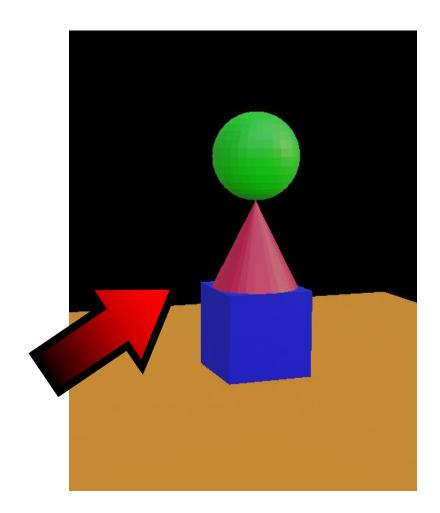
# PRESS PKEY CONE FALLS DOWN

# SELECT DYNAMIC FOR SPHERE AND CUBE









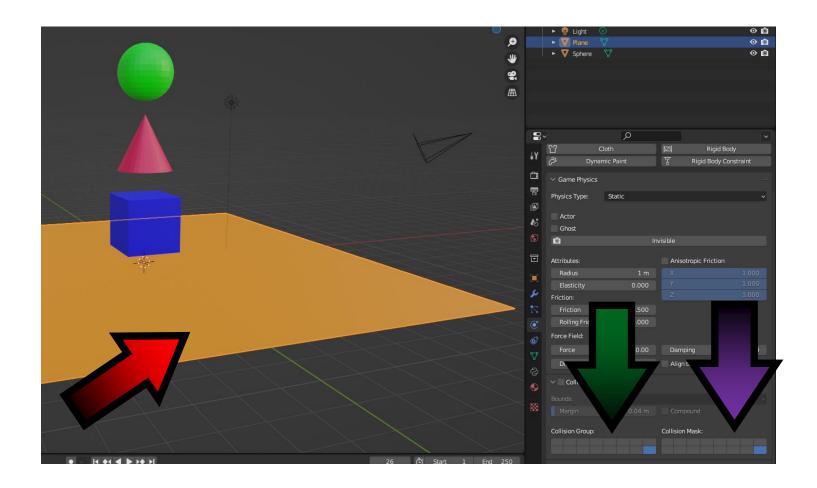
# PRESS **P KEY ALL BLOCKS** FALL DOWN







## SELECT PLANE SET COLLISION GROUP AND COLLISION MASK AS IN THE DRAWING



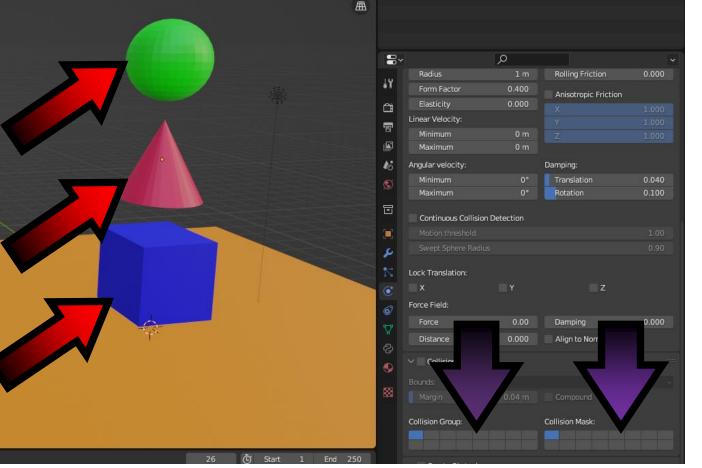




**UPBGE** 

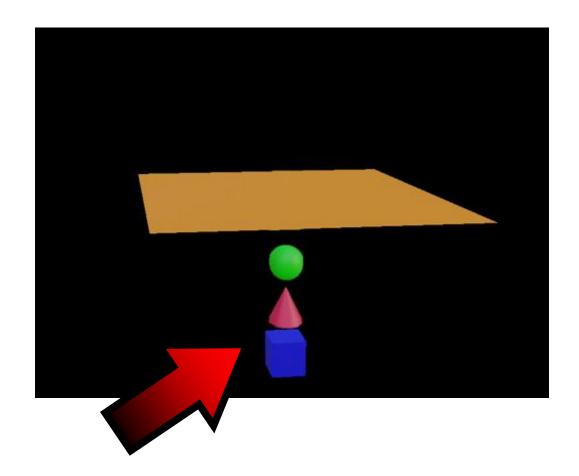


# FOR THREE MODELS SET COLLISION GROUP AND COLLISION MASKAS IN THE DRAWING









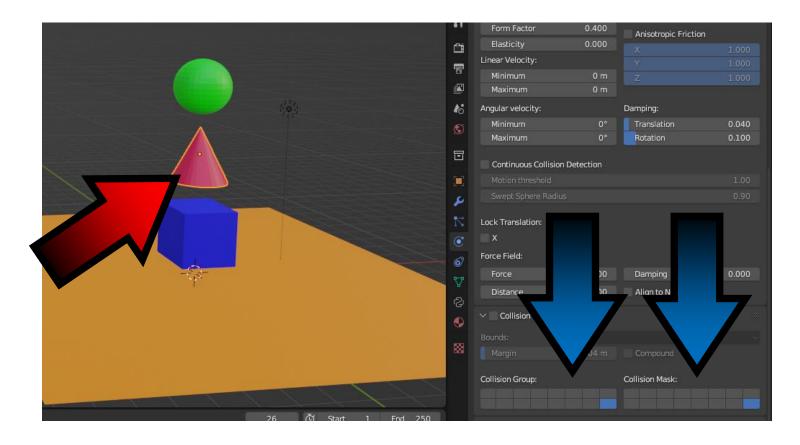
# PRESS P KEY

# ALL BLOCKS FLEW THROUGH THE PLANE





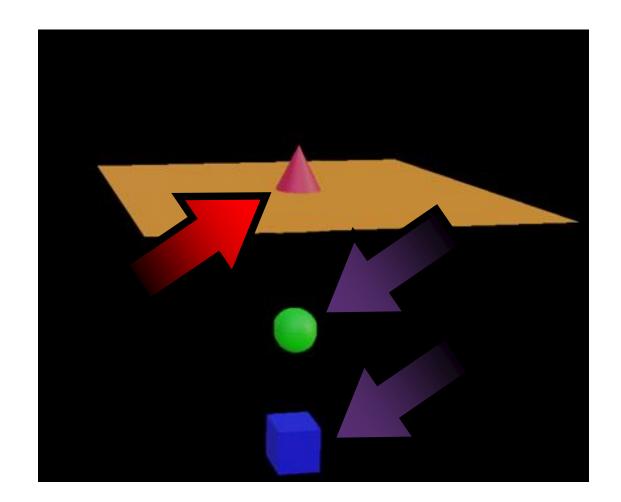
# **SELECT CONE**



SET COLLISION GROUP AND COLLISION MASK SAME SAME AS FOR PLANE







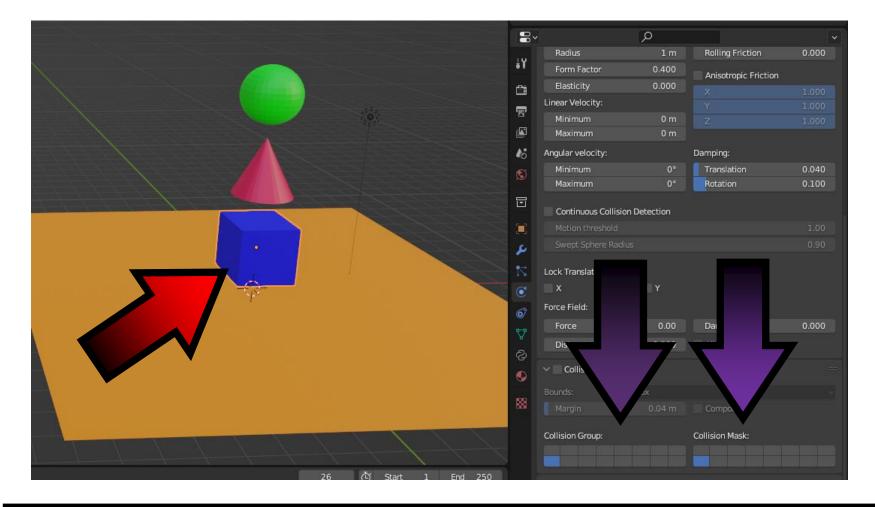
## PRESS THE P KEY

TWO MODELS FLYDOWN THE CONE STOPPED ON THE PLANE





## CHANGE CUBE SETTINGS SET COLLISION GROUP AND COLLISION MASKAS SHOWN

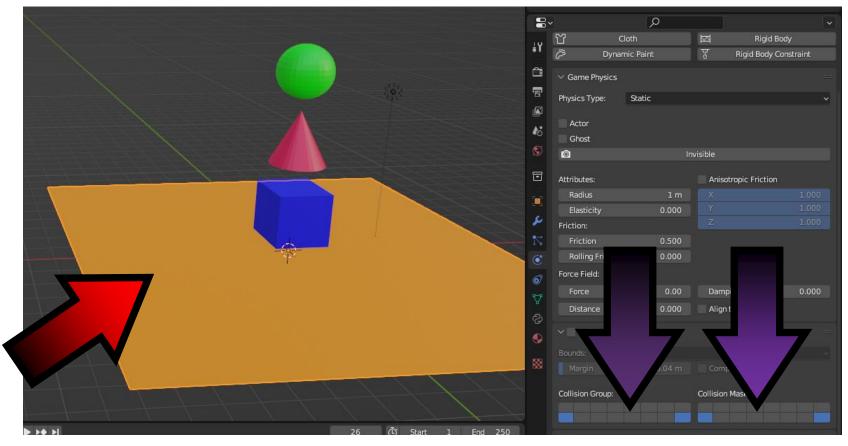








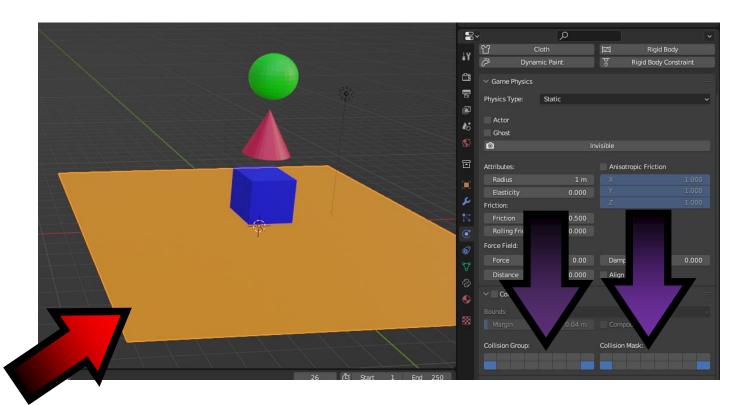
## USE SHIFT KEY CHANGE PLANE SETTINGS SET COLLISION GROUP AND COLLISION MASKAS







## **USE SHIFT KEY**

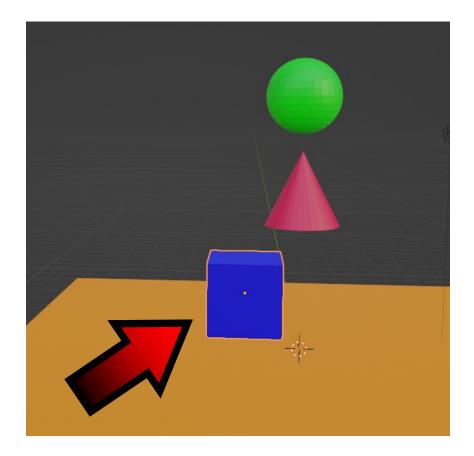


#### CHANGE PLANE SETTINGS

SET COLLISION GROUP AND COLLISION MASKAS IN THE DRAWING



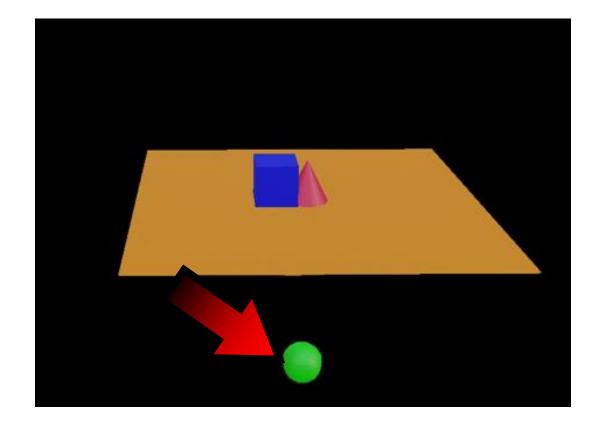




# MOVE THE CUBE A LITTLE ON THE X AXIS



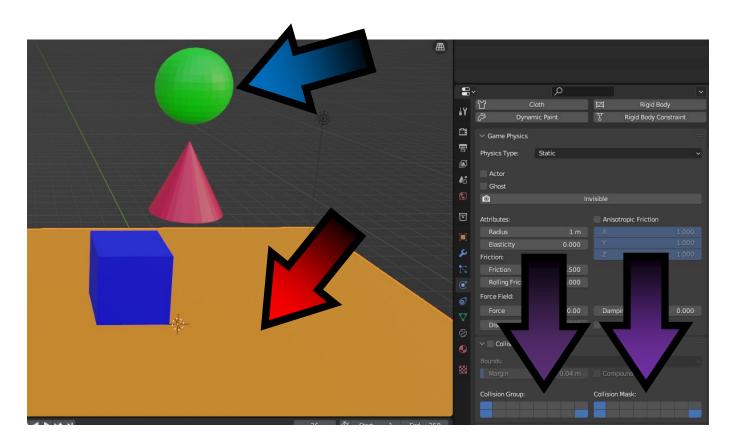




# ONLY SPHERE FLEW DOWN





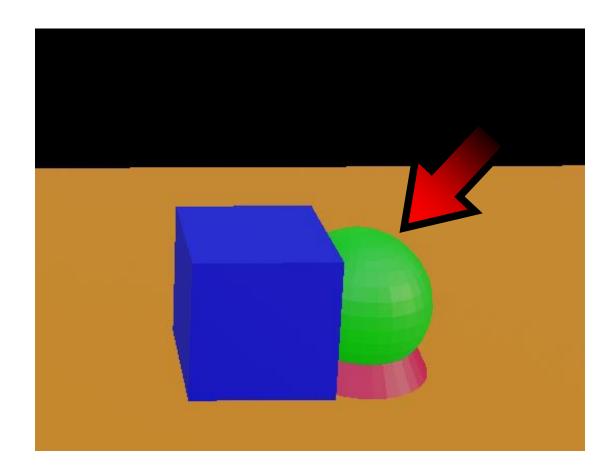


#### CHANGE PLANE SETTINGS

SET COLLISION GROUP AND COLLISION MASK ADDING SPHERE







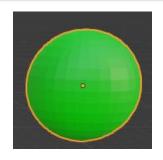
PRESS P KEY

PLANE STOPPED ALL THE BLOCKS









∼ Collision Bou	nds		
Bounds:	🗇 Box		
	0.04 m	Compound	
Collision Group:		Collision Mask:	

∼ Collision Bour	nds		
Bounds:	🗍 Box		
	0.04 m	Compound	
Collision Group:		Collision Mask:	

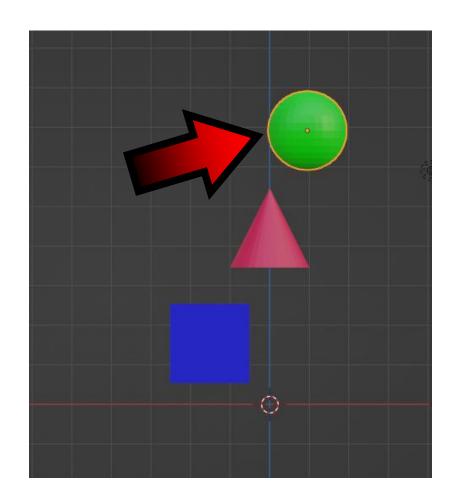
#### SET THE PARAMETERS AS IN THE DRAWING FOR ONE OF THESE TWO SOLID BODY

✓ Collision Bour	nds		
Bounds:	🗍 Box		
Margin	0.04 m	Compound	
Collision Group:		Collision Mask:	





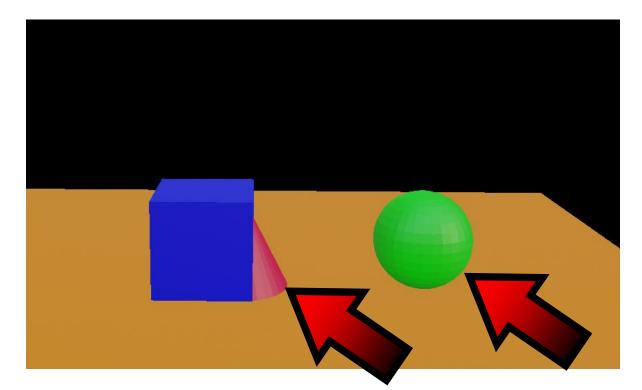




# MOVE SPHERE A LITTLE ALONG X AXIS







# PRESS PKEY

## SEE HOW THE SOLIDS BEHAVE





## **CHOOSE LOGIC BRICKS EDITOR**

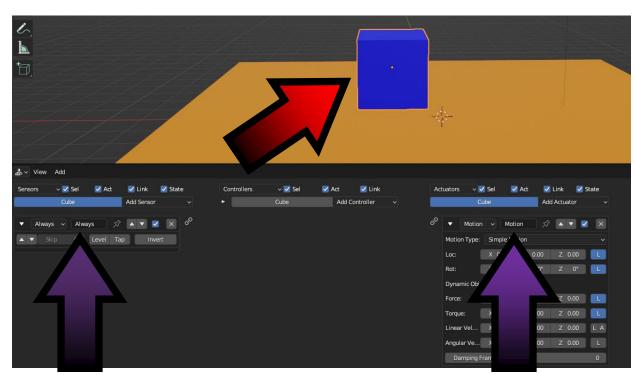
<b>Ø</b> ~	Playback ~ Keying	∽ View	Marker				• •		
Gen	eral		Animation		Scripting		Data		
<b>#</b>	3D Viewport	Shift F5	•≣• Dope Sheet	Shift F12	Text Editor	Shift F11		Shift F9	
	Image Editor	Shift F10	🔇 Timeline	Shift F12	🍰 Logic Bricks Ed	itor	吕 Properties	Shift F7	
<b>B</b>	UV Editor	Shift F10	🏒 Graph Editor	Shift F6	>		File Browser	Shift F1	
	Compositor	Shift F3	<sup>▲</sup> 2 D <u>ri</u> vers	Shift F6	Logic Bricks E	ditor to	Asset Browser	Shift F1	
	Texture Node Editor	Shift F3	티코 Nonlinear Anin	nation			readsheet		
₹.	Geometry Node Editor	Shift F3					, ⊿rences		
O	Shader Editor	Shift F3							
o***	Video Sequencer	Shift F8							
-¢-	Movie Clip Editor	Shift F2							
10	alaak		Detete Merry			Samharsh Manar			







# **MARK CUBE**



FOR SENSORS SET ALWAYS

FOR ACTUATORS SET MOTION





## **CONNECT THE ELEMENTS**

🏭 🗸 View Add						
Sensors 🗸 🗹 Sel 🗹 Act	🗹 Link 🛛 🗹 State	Controllers 🗸 🗸 Sel	🗹 Act 🛛 🗹 Link	Actuators ~	🗹 Sel 🛛 🔽 Act 🚦	🖌 Link 🛛 🗹 State
Cube 4	Add Sensor 🗸 🗸	► Cube	Add Controller	·	Cube A	dd Actuator 🗸 🗸
▼ Always ∨ Always 🔗	▲ ▼			ළ ව 🔻 Motic	n v Motion ج	? 🔺 🗹 🗙
▲ ▼ Skip 0 Level Tap	Invert	Controller visible at: State	1 ~	Motion Type	: Simple Motion	
				Loc:	X 0.00 Y 0.00	Z 0.00
				Rot:	X 0° Y 0°	Z 0° L
				Dynamic Ob	ject Settings:	
				Force:	X 0.00 Y 0.00	Z 0.00
				Torque:	X 0.00 Y 0.00	Z 0.00
				Linear Vel	X 0.00 Y 0.00	Z 0.00 L A
				Angular Ve	. X 0.00 Y 0.00	Z 0.00 L
				Damping	Frames	0



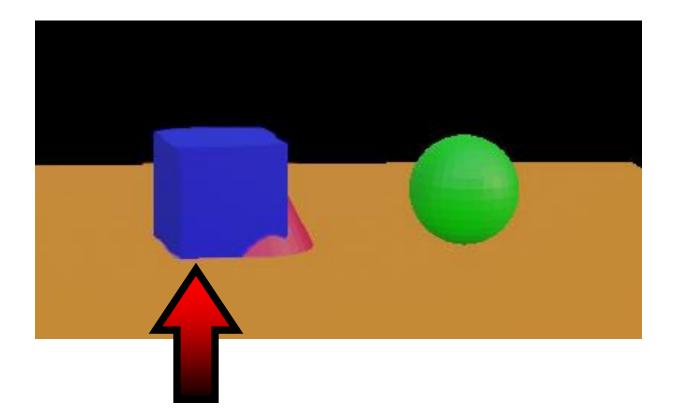


Actua	ators 🗸	🖌 Sel	🗹 Act	🛃 Linl	k 🗹 :	State
	С	ube		Add Act	tuator	~
P	<ul> <li>Motion</li> </ul>	1 <b>v</b> M	otion	\$ \$		×
P	Motion Type:	Simple	Motion			~
ι	Loc:	X 0.00	Y 0	.00 Z	0.00	L
F	Rot:	X 0°	Y	0° Z	1.5°	L
C	Dynamic Obje	ect Settings	:			
F	Force:	X 0.00	Y 0	.00		L
1	Torque:	X 0.00	Y 0	.00		
ι	inear Vel	X 0.00	Y 0	.00		LA
ļ	Angular Ve	X 0.00	Y 0	.00		
	Damping F	rames				0

# SET ROTATION AROUNDZ AXIS TO 1.5







# CUBE WILL ROTATE







#### YOU CAN EXPERIMENT WITH THE SETTINGS YOURSELF

🛃 🗸 View	Add			
Sensors	v 🗹 Sel	🗹 Act	🗹 Link	🛃 State
	Cube		Add Sensor	· •
			Actuat	or
			Alway	s
			Collisi	on
			Delay	
			Joystic	:k
			_ Keybo	ard
			Messa	ge
			Mouse	
			Mover	nent
			Near	
			Proper	ty
			Radar	
			Rando	m
			Ray	

Controllers	v 🗹 Sel	<b>V</b> A	Act 🗹 Link	
•	Cube		Add Controller	
			And	
			Or	
			Nand	
			Nor	
			Xor	
			Xnor	
			Expression	
			Python	

Actuators	v 🗹 Sel	🗹 Act	🗹 Link 🛛 🗹 State
	Cube		Add Actuator 🛛 🗸 🗸
			Action
			Camera
			Collection
			Constraint
			Edit Object
			<u>F</u> ilter 2D
			Game
			Message
			Motion
			Mouse
			Parent
			Property
			Random
			Scene
			Sound
			State
			Steering
			Vibration
			Visibility

# THANK YOU FOR YOUR ATTENTION



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