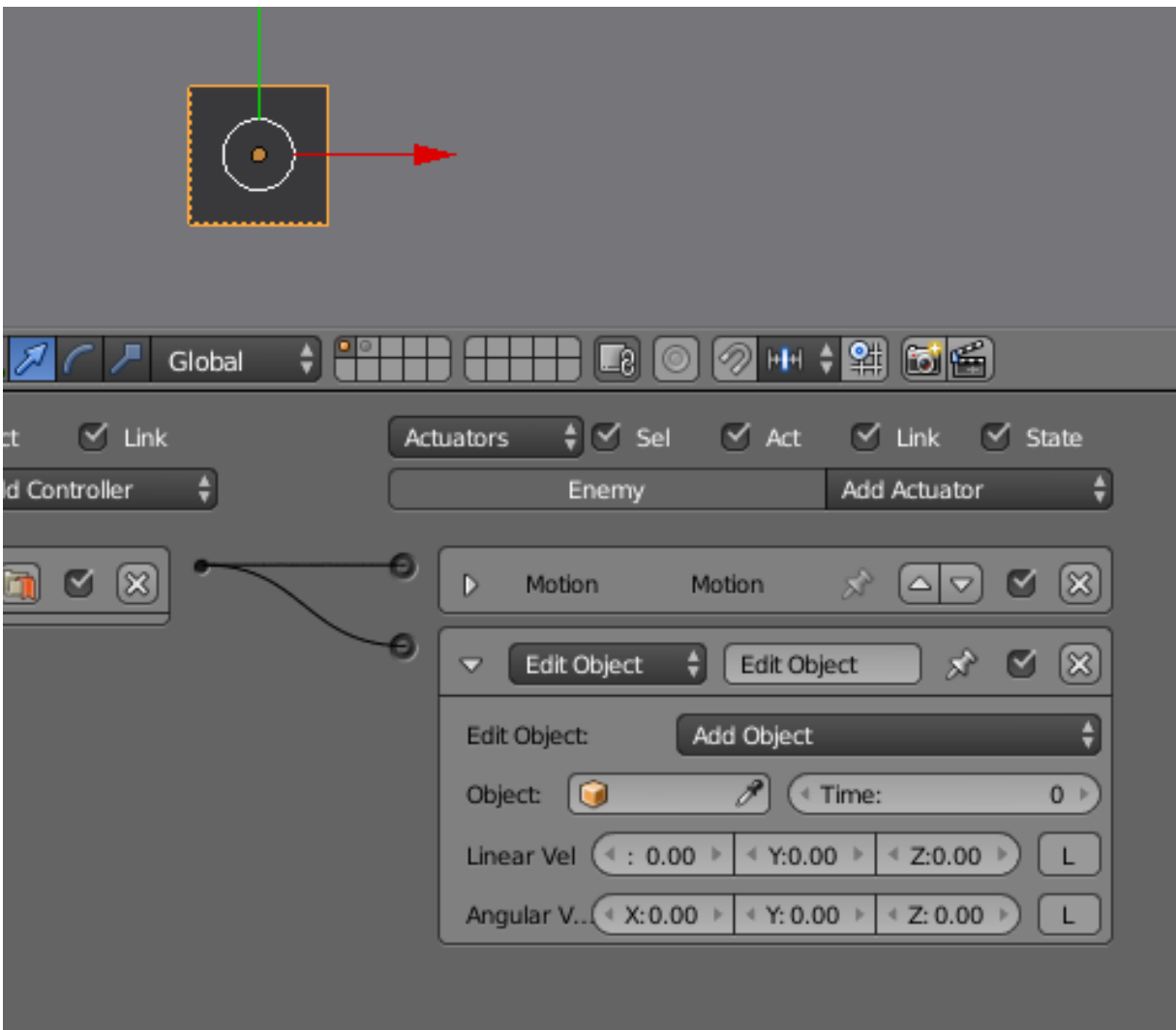


CHAPTER 4:

CREATING AN ENEMY



WE NEED TO CREATE SOME ENEMIES FOR OUR HERO TO FIGHT, BUT PROPER ARTIFICIAL INTELLIGENCE IS EXTREMELY DIFFICULT TO ACHIEVE. FOR THAT REASON, WE ARE ATTEMPTING TO CREATE ONLY THE MOST BASIC OF A.I. BOTS. OUR ENEMY IS SIMPLY GOING TO FOLLOW OUR CHARACTER. THIS IS NOT REALLY USEFUL FOR MANY VIDEO GAMES, BUT IT DOES SHOW THE PROCESS OF PROGRAMMING A.I. YOU CAN THINK OF THIS AS A KIND OF ZOMBIE-DEFENSE-TYPE GAME.

THERE ARE MANY TUTORIALS ONLINE THAT CAN SHOW YOU HOW TO MAKE MUCH MORE COMPLICATED A.I. BOTS. TRY OUT THIS CHAPTER, AND THEN GIVE SOME OF THOSE ONLINE TUTORIALS A TRY. ALSO, IN THIS CHAPTER, I USE A SIMPLE CUBE FOR OUR ENEMY. FEEL FREE TO CREATE A DIFFERENT ENEMY, LIKE ANOTHER SHIP OR ANIMAL OR SOMETHING. LATER ON IN THIS BOOK, I MAKE ENEMY SKULLS THAT ATTACK THE HERO. MAKE AN ENEMY THAT YOU WOULD WANT TO FIGHT IN YOUR GAME.

HERE IS A LIST OF BLENDER HOTKEYS:

SHIFT+A: ADD AN OBJECT TO SCENE

TAB: TOGGLE OBJECT AND EDIT MODE

A: SELECT/DESELECT ALL OBJECTS IN A SCENE

S: SCALE

R: ROTATE

G: MOVE

X: DELETE

F: MAKE A FACE

C: SELECT SMALL AREAS

B: SELECT A LARGE AREA

CTRL+R: ADD LOOP CUT

CTRL+Z: UNDO

5: TOGGLE PERSPECTIVE/ORTHO MODE

1 (NUM PAD): FRONT VIEW (CTRL+1=OPPOSITE)

3 (NUM PAD): SIDE VIEW (CTRL+3=OPPOSITE)

7 (NUM PAD): TOP VIEW (CTRL+7=OPPOSITE)

HOLD MMB+DRAG: ROTATE VIEWPORT

SCROLL MMB: ZOOM IN/OUT

HOLD SHIFT+MMB: SHIFT VIEWPORT

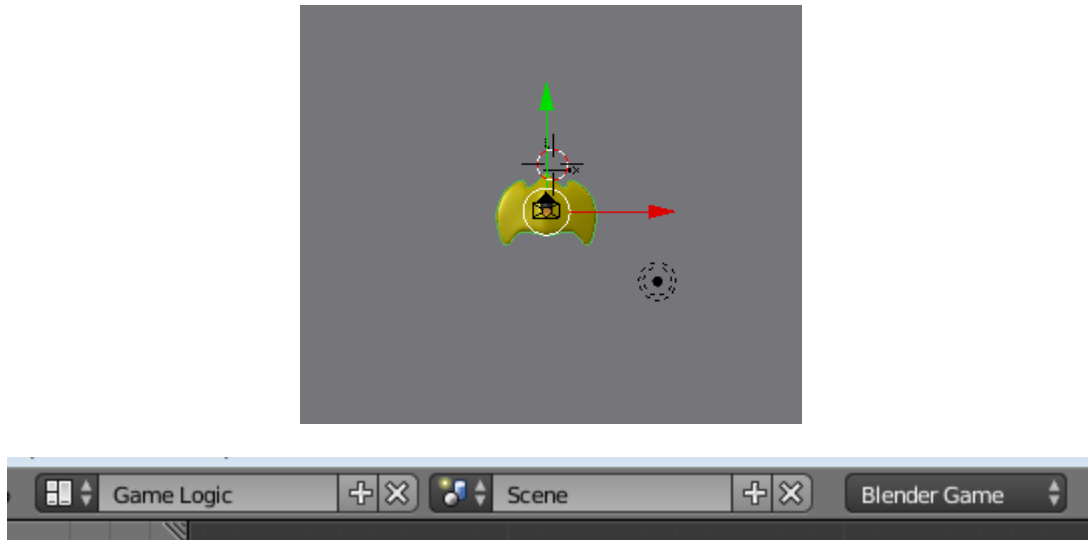
SHIFT+SPACEBAR: MAXIMIZE VIEWPORT

SHIFT+S: SET CURSOR

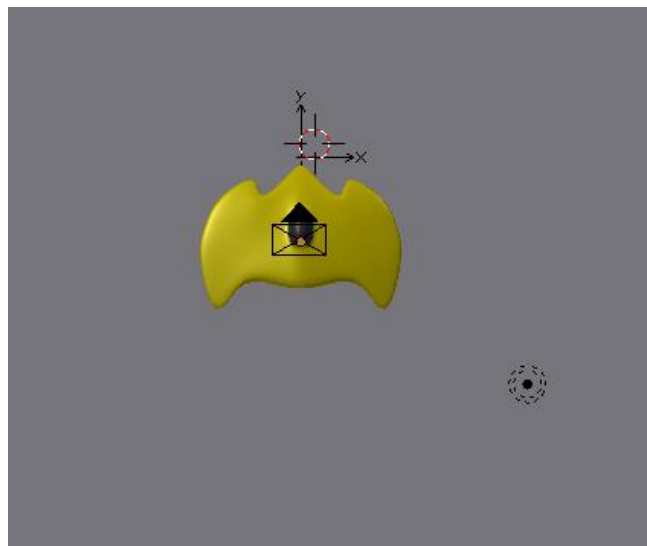
CTRL+J: JOIN MESHES

Z: TOGGLE WIREFRAME MODE

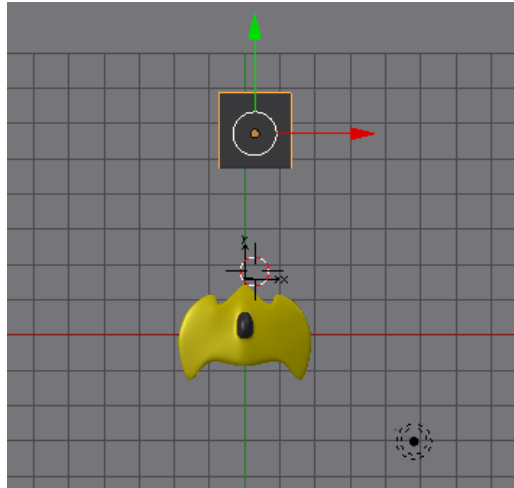
SHIFT+D: DUPLICATE



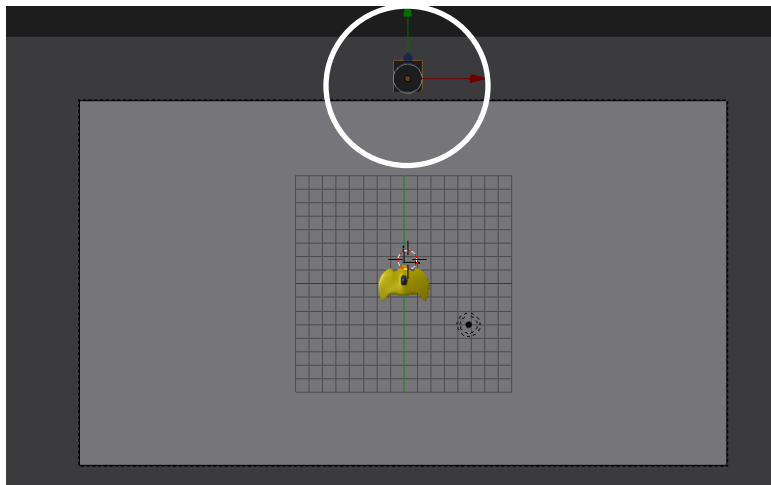
- 1) LET'S ADD SOME SIMPLE ARTIFICIAL INTELLIGENCE (AI). MAKE SURE YOU HAVE YOUR SHIP CONTROLS SET UP, INCLUDING THE ABILITY TO FIRE PROJECTILES. MAKE SURE YOU ARE IN GAME LOGIC.



- 2) MAKE SURE EVERYTHING IS DESELECTED BY PRESSING 'A'.



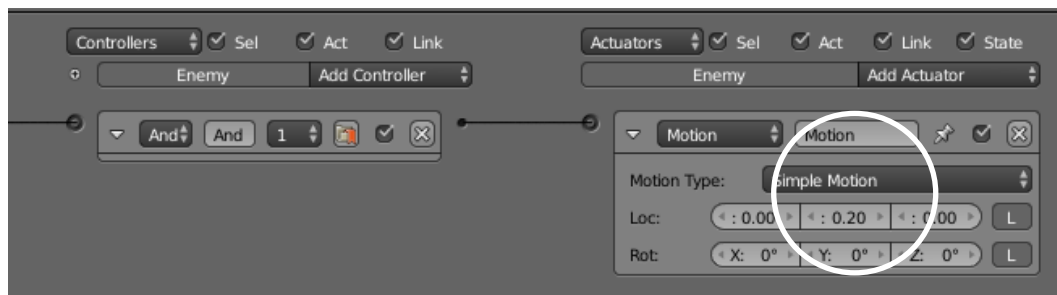
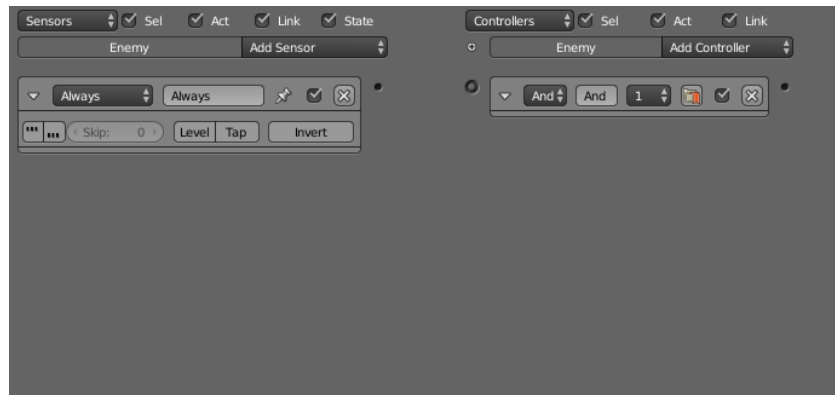
- 3) ADD A CUBE TO YOUR SCENE (SHIFT+A) AND ADD A COLOR TO IT (MATERIALS TAB). THIS WILL BE THE ENEMY FOR THIS CHAPTER. IF YOU WOULD LIKE TO MAKE YOUR ENEMY ANOTHER SHIP OR ALIEN, PLEASE FEEL FREE TO DO SO.



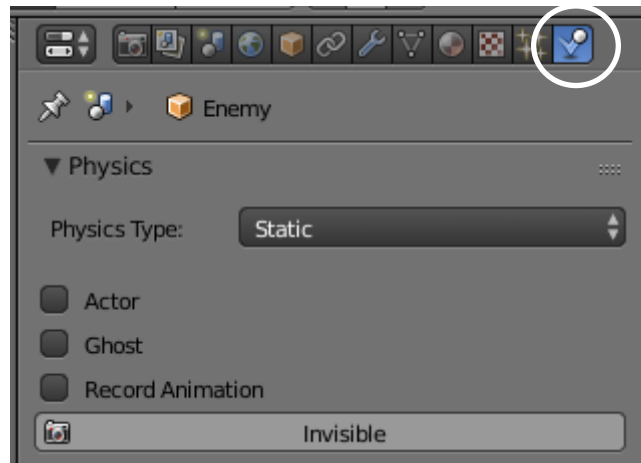
- 4) PRESS ZERO (0) TO GO INTO CAMERA MODE. PRESS 'G' TO MOVE THE ENEMY UNTIL IT IS JUST OUTSIDE THE CAMERA BOUNDARY.



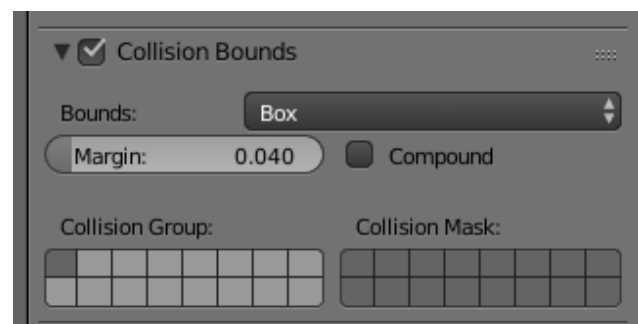
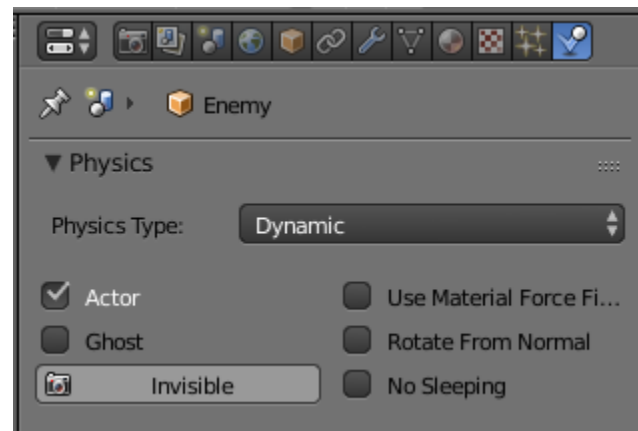
- 5) WITH THE ENEMY STILL SELECTED, CLICK ON THE OBJECT PANEL. RENAME THE CUBE 'ENEMY'.



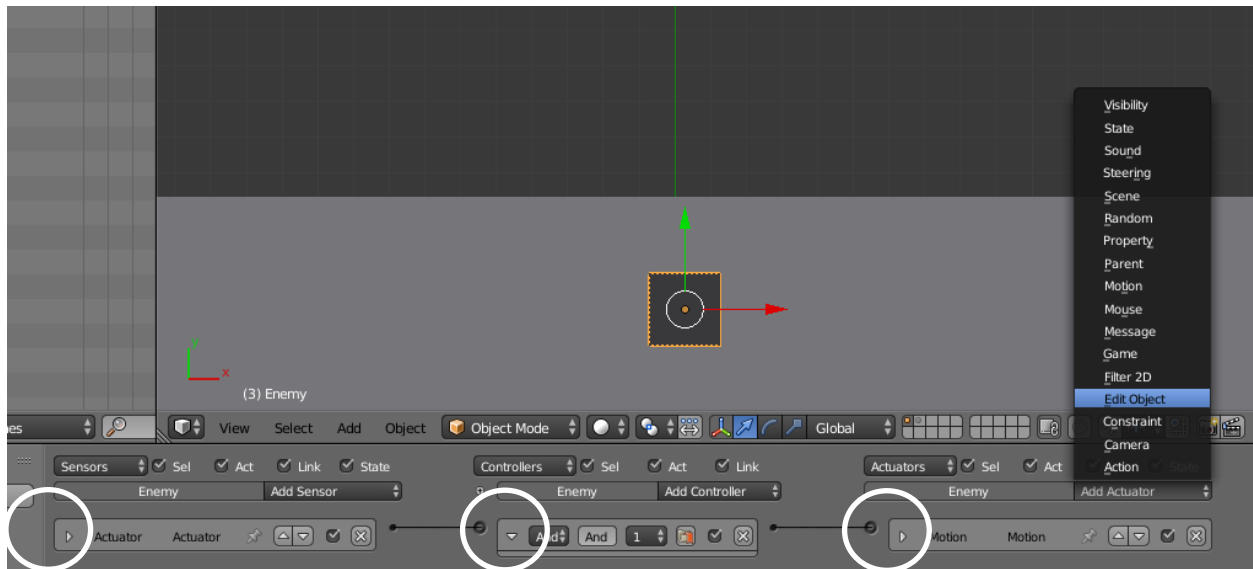
- 6) PRESS '7' TO EXIT CAMERA MODE AND ENTER TOP VIEW. WITH YOUR CUBE STILL SELECTED, ADD AN 'ALWAYS' SENSOR. ADD AN 'AND' CONTROLLER AND A 'MOTION' ACTUATOR. CHANGE THE Y-LOC TO '0.2'.



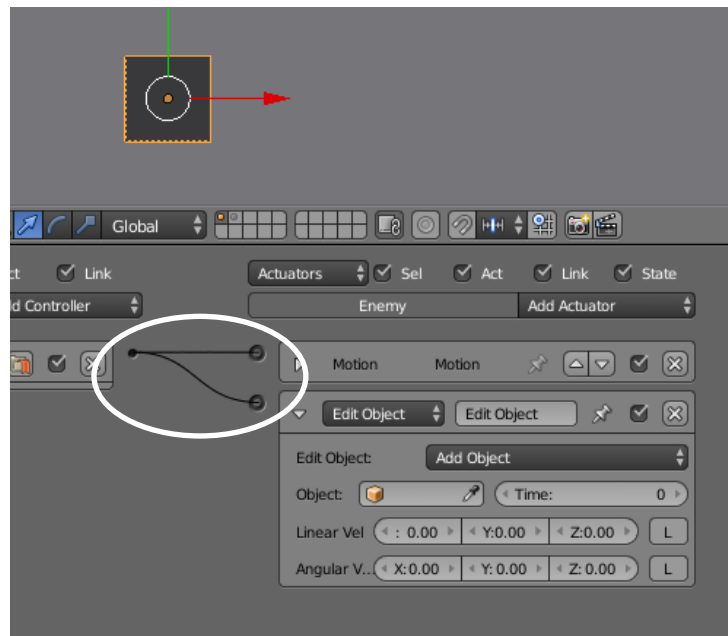
7) WITH THE CUBE STILL SELECTED, SELECT THE PHYSICS TAB.



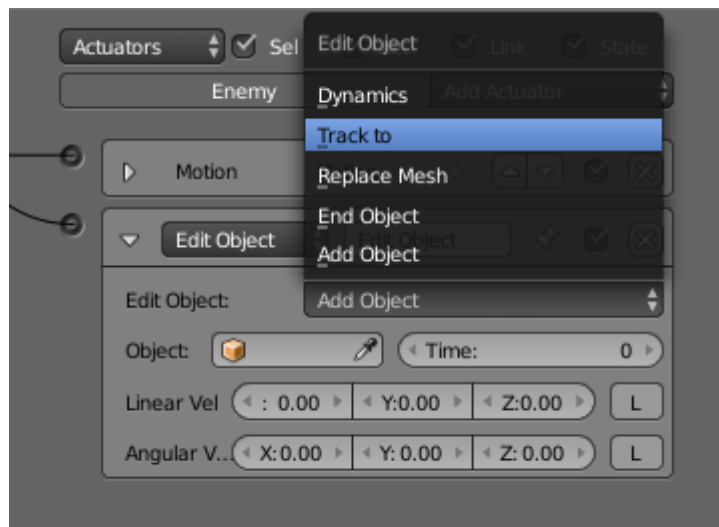
8) CHANGE THE PHYSICS TYPE TO DYNAMIC AND CHECK THE BOX NEXT TO COLLISION BOUNDS.



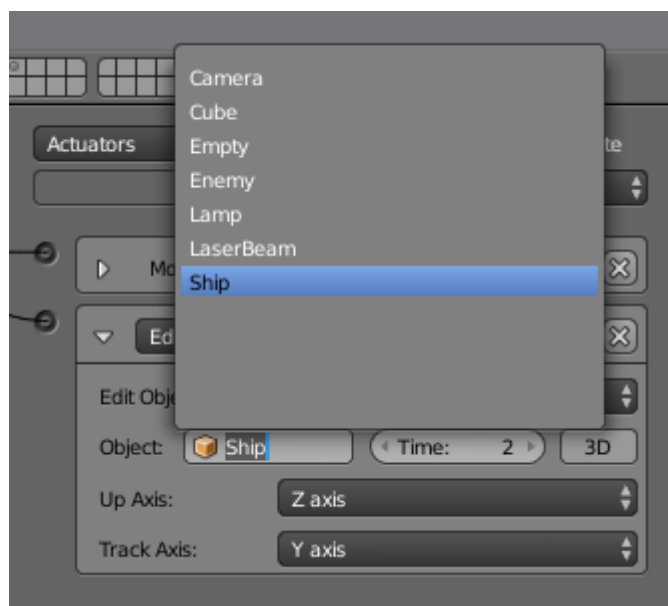
9) MINIMIZE YOUR LOGIC BRICKS BY CLICKING THE WHITE ARROWS (CIRCLED). ADD ANOTHER ACTUATOR AND SELECT 'EDIT OBJECT'.



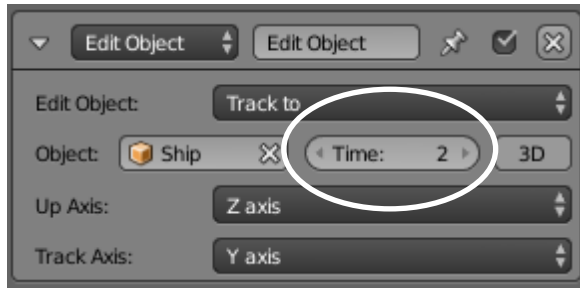
10) CONNECT THE 'AND' CONTROLLER TO THE 'EDIT OBJECT' ACTUATOR.



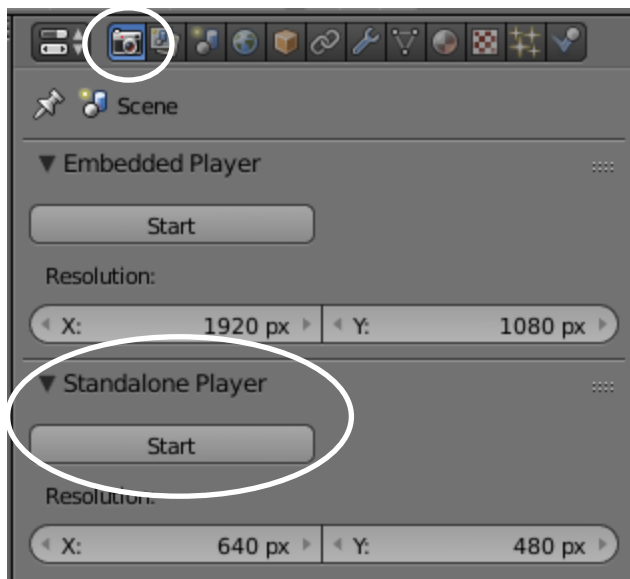
11) CLICK IN THE BOX NEXT TO EDIT OBJECT. SELECT 'TRACK TO'.



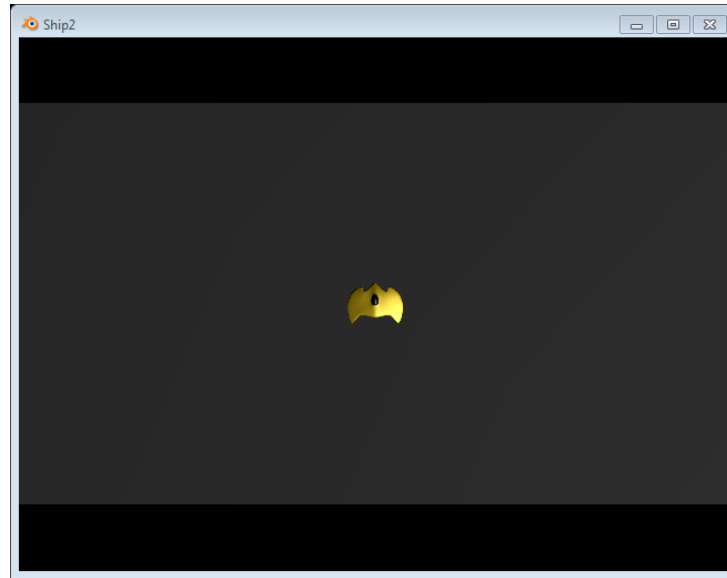
12) NOW YOU NEED TO TELL THE CUBE WHAT TO TRACK. IN THE OBJECT BOX, SELECT THE NAME OF YOUR SPACE SHIP. I'VE NAMED MINE 'SHIP'.



13) MAKE SURE THAT TIME IS SET TO 2. YOU CAN CHANGE THIS TO WHATEVER YOU'D LIKE; ITS PURPOSE IS TO CONTROL THE AMOUNT OF TIME IT TAKES YOUR ENEMY TO TURN.



14) NOW PRESS THE START BUTTON UNDER STANDALONE PLAYER IN THE RENDER PANEL.



15) YOUR GAME SHOULD OPEN IN A NEW WINDOW. THE CUBE SHOULD CHASE YOUR SHIP, AND BECAUSE YOU APPLIED DYNAMIC PHYSICS, YOU SHOULD BE ABLE TO SHOOT THE CUBE WITH YOUR PROJECTILES AND SEND IT FLYING IN THE OPPOSITE DIRECTION.

16) YOU JUST COMPLETED YOUR FIRST AI BOT!! IT IS AN ANGRY CUBE!!!

[illegible]