

Misha Smirnov  
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Zachary While  
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## HW5

### Task 1:

This one was hard because I struggled coming up with unique behaviour that wasn't too simple but didn't involve overly complicated methods like checking line of sight or some kind of decision tree. The three AIs are as follow:

Brown Cat: this one just follows the player but only updates the player's position every 5 seconds. This means that it is sometimes behind and can be outsmarted.

Orange Cat: This one will patrol its normal route, but will start chasing the mouse if it gets within 5 tiles of it (using manhattan distance)

White Cat: For this, I just had it chase 5 tiles under the player, which makes it on par with the other cats most times, but does give it the opportunity to get the drop on the player in rare situations.

### Task 2:

I simply used the `play()` function for the sounds and loaded and played the music as necessary

### Task 3:

I used the animation code from the cats as a base for my code and simply played the correct animation for each direction. Using the `frame_num` attribute I could simply play the correct frame based on time.