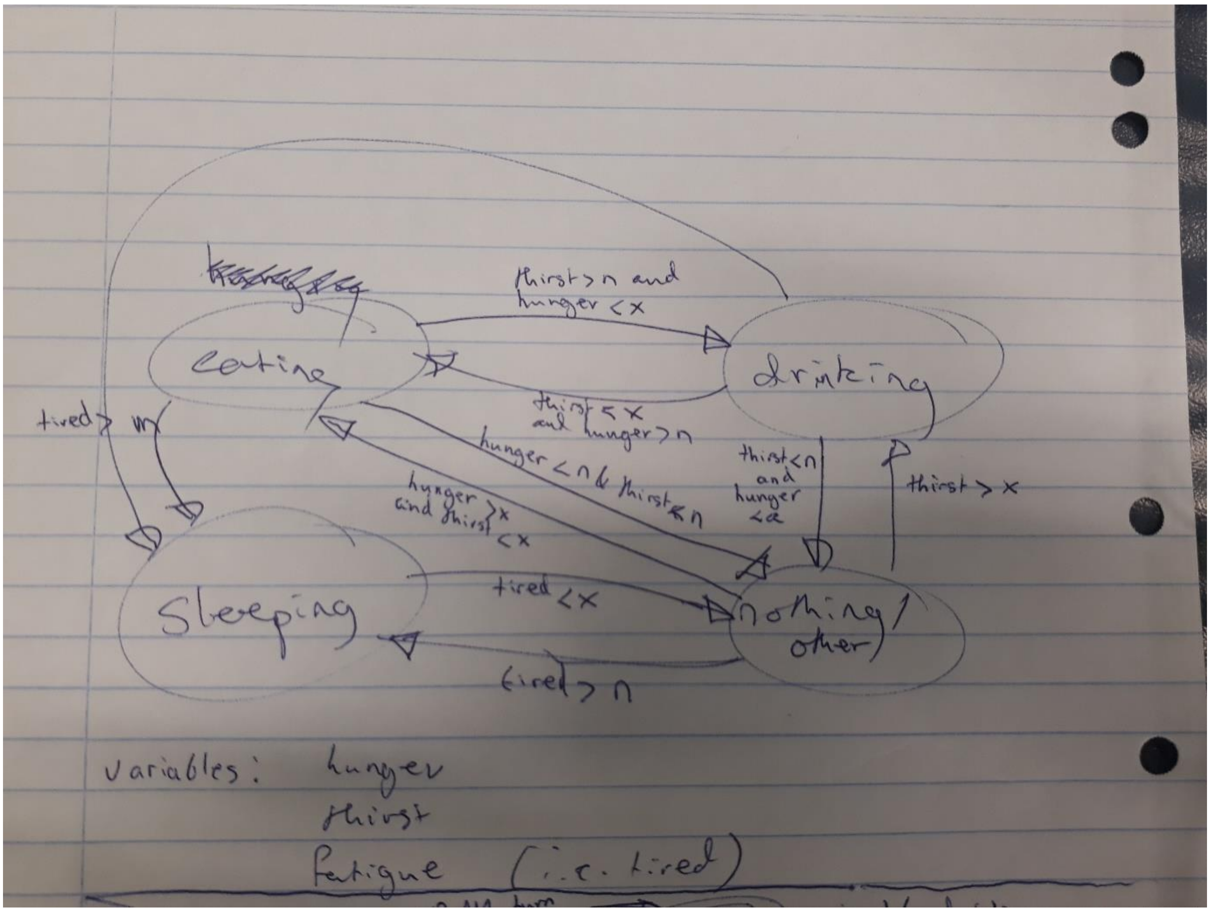
Simple FSM Diagram



Simple FSM Code

```
class SimpleFSM:
    def Thinking(self):
        #local variables
        fatigue = 0
        hunger = 0
        thirst = 0

        states = ["eating", "drinking", "sleeping", "awake"]
        currentState = "awake"

        alive = True
        running = True
        maxLimit = 100
        gameTime = 0

        while running and alive:
            gameTime += 1

            #sleeping: reduce fatigue, everything else increases
            if currentState is "sleeping":
                #sleep
                print("Zzzzzzzzzzz")
                fatigue -= 1
                hunger += 0.5
```

```python
    thirst += 0.5

    #check if not tired
    if fatigue < 5:
        #check for other states
        if thirst > 7:
            currentState = "drinking"
        elif hunger > 7:
            currentState = "eating"
        else:
            currentState = "awake"

#awake: doing nothing, all variables increase
elif currentState is "awake":
    #do nothing
    print("Bored . . .")
    hunger += 1
    thirst += 1
    fatigue += 1

    #check for other states
    if fatigue > 15:
        currentState = "sleeping"
    elif thirst > 7:
        currentState = "drinking"
    elif hunger > 7:
        currentState = "eating"

#eating: hunger reduces, fatigue and thirst increase
elif currentState is "eating":
    #eat
    print("Om nom nom nom")
    hunger -= 2
    thirst += 1
    fatigue += 0.5

    #check for other states
    if fatigue > 15:
        currentState = "sleeping"
    elif thirst > 7:
        currentState = "drinking"
    elif hunger < 2:
        currentState = "awake"

#drinking: thirst reduces, all other states increase
elif currentState is "drinking":
    #drink
    print("Gulp gulp gulp")
    thirst -= 2
    hunger += 1
    fatigue += 0.5

    #check for other states
    if fatigue > 15:
        currentState = "sleeping"
    elif thirst < 2:
        if hunger > 7:
            currentState = "eating"
        else:
            currentState = "awake"

else:
```

```
                #broken
                print("Why are you here? The code must have something wrong with it . . .")
                die()

            #checking if starved to death
            if hunger > 20:
                alive = False
                print("Gurgle . . . Gurgle . . . *death rattle*")

            elif thirst > 20:
                alive = False
                print("*gasp* . . . *gasp* . . . *death rattle*")

            elif fatigue > 20:
                alive = False
                print("*thud* . . . *death rattle*")

            #checking for end of game time
            if gameTime > maxLimit:
                running = False
                print("*siren goes off*")

print("Hello world!")

ai = SimpleFSM()

ai.Thinking()

print("--- The End ---")
```