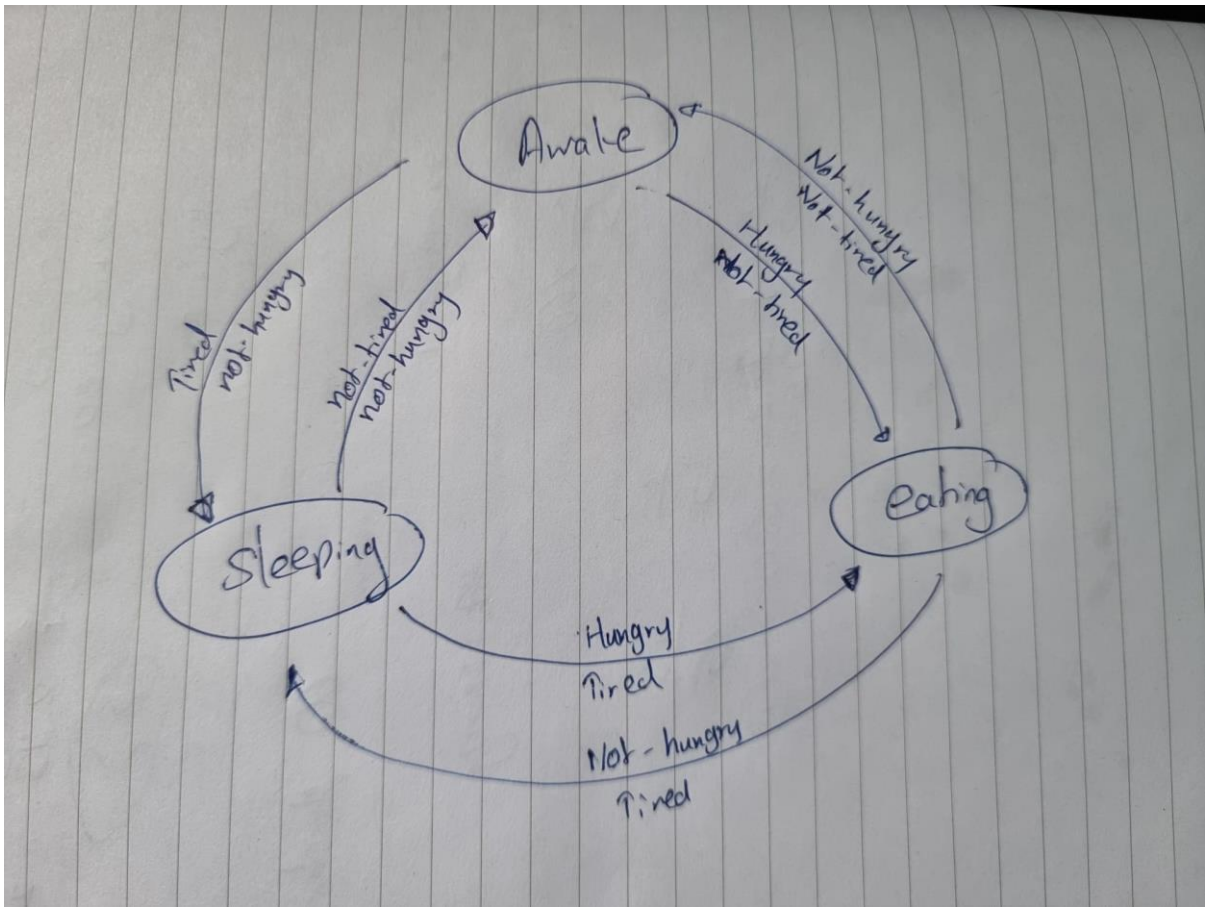
Task 2

Name: Abdul Azeez Mohamed Ismath

Student Id: 102434407

Git link: https://github.com/leoazeez/COS30002-102434407



I have 2 variables and 3 states as stated above.

The diagram shows how as the variables change the state of the character changes aswell.

- If the character is hungry and tired he will be in eating state.
- If the character is hungry and not tired he will be in eating state.
- If the character is not hungry and not tired he will be in awake state.
- If the character is tired and not hungry he will be in sleeping state.

As you can see the eating stage is given more importance because if hunger goes above 20 the character will die.

Code:

```python
while running and alive:
    game_time += 1

    # Sleeping: reduced tired, hunger still increases
    if current_state is 'sleeping':
        # Do things for this state
        print("Zzzzzz")
        tired -= 1
        hunger += 1
        # Check for change state
        if tired < 5:
            current_state = 'awake'
        if hunger > 7:
            current_state = "eating"

    # Awake: does nothing interesting. gets hunugry. gets tired
    elif current_state is 'awake':
        # Do things for this state
        print("Bored.... BORED! ...")
        tired += 1
        hunger += 1
        # Check for change state
        if hunger > 7:
            current_state = 'eating'
        if tired > 5:
            current_state = 'sleeping'

    # Eating: reduces hunger, still gets tired
    elif current_state is 'eating':
        # Do things for this state
        print("Num, num, num...")
        tired += 1
        hunger -= 1
        # Check for change state
        if hunger < 7:
            current_state = 'awake'
        if tired > 5:
            current_state = 'sleeping'
```

Output:

```
Zzzzzz
Bored.... BORED! ...
Bored.... BORED! ...
Bored.... BORED! ...
Bored.... BORED! ...
Bored.... BORED! ...
Bored.... BORED! ...
Bored.... BORED! ...
Zzzzzz
Num, num, num...
Zzzzzz
Num, num, num...
Zzzzzz
Num, num, num...
Zzzzzz
Num, num, num...
Zzzzzz
Num, num, num...
Zzzzzz
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Zzzzzz
Num, num, num...
Zzzzzz
```

```
Num, num, num...
Zzzzzz
Num, num, num...
Zzzzzz
Num, num, num...
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Num, num, num...
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Zzzzzz
```