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SWINBURNE UNIVERSITY  
OF TECHNOLOGY

# COS30002

## Finite Machine Plan

Task 2, Week 1

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# Tennis Player NPC

Start with identification of at least three states (write a list) (“defending”, “attacking” ...)

**Tennis player**

- Running
- Hitting Ball
- Celebrating
- Waiting

List the variables needed (at least two) (eg “thirst” level, “money”, “damage” ...)

- Stamina
- Adrenaline
- Frustration Level

Identify the actions or variables that will cause a state change (in words)

The NPC will be waiting when the ball is not coming towards the NPC

The amount of stamina will cause a running npc to stop running because they are no longer capable

Seeing an incoming ball that is nearby will cause the npc to hit the ball back

Seeing an incoming ball that is far away will cause the npc to run

Winning a point will cause an npc to celebrate

Having a high adrenaline will cause the npc to hit the ball harder and run faster

## Create a state diagram to describe your system

