# SWEN30006 Software Modelling and Design
# Workshop 6: State Machines – Partial Solution

School of Computing and Information Systems
University of Melbourne
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## Part 1 Building Models

Figure 1 shows one possible interpretation of the information provided. There may be other reasonable interpretations.

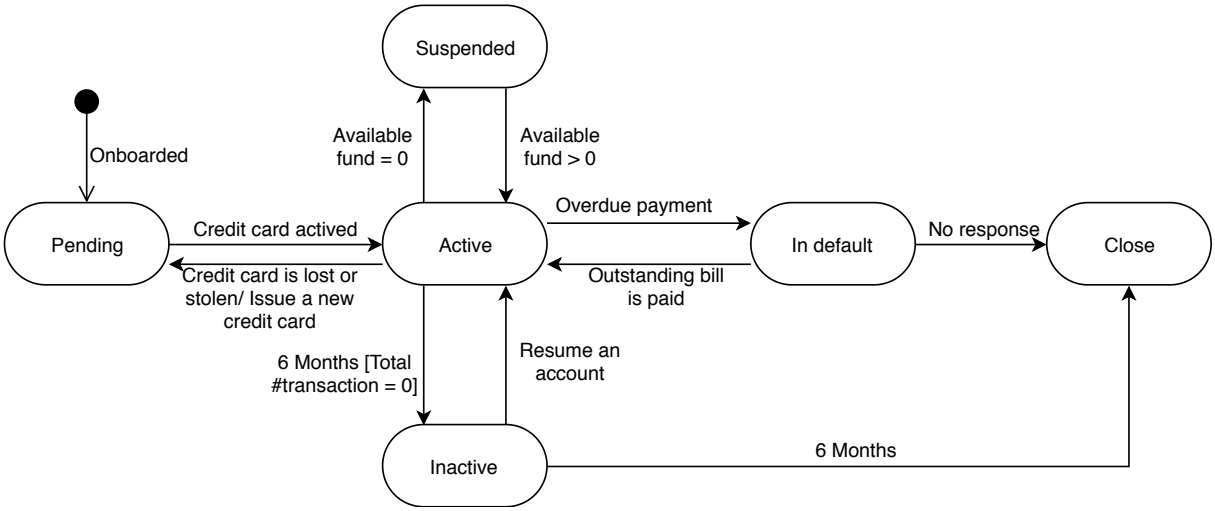


Figure 1: A potential state machine model for the credit card system

### Task 1.1 Creating A Nested State

Figure 2 shows one way the nested states could be modelled. Again, there may be other reasonable interpretations.

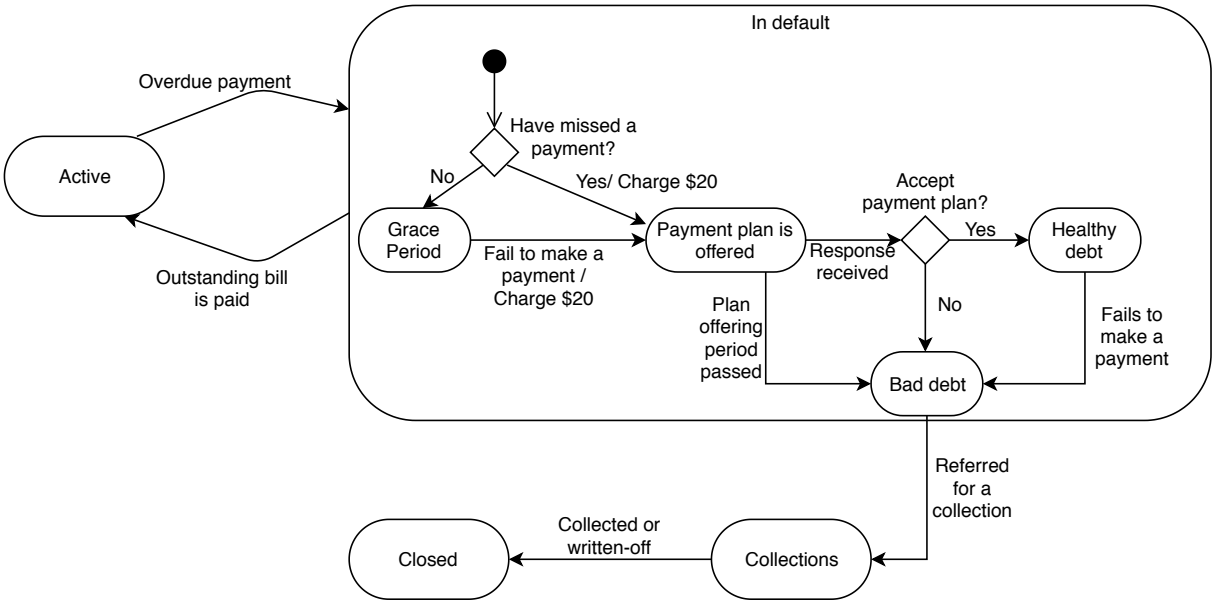


Figure 2: A potential model for the nested states in the credit card system

# Part 2 Implementing State Machines

## Task 2.1 Creating a Design Model

Figure 3 provides a partial design model for the credit card system.

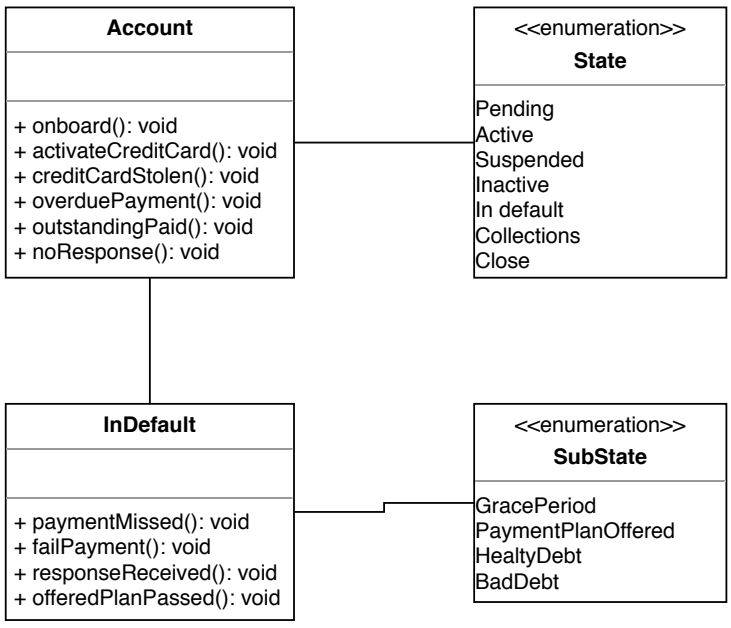


Figure 3: A partial design model for the credit card system

## Task 2.2 Writing Code

Make sure your code matches your state machine model and design class diagram. It should clearly show when state transitions are occurring (e.g., by printing a message to the terminal). The only things you

have been asked to implement for this task are the **states** and the **state transitions**. You do not need to add any additional functionality.