



Activity Diagram – Simplest Solution

Marking Scheme

- Activity Diagram out of 25 points
 - 1 point for each identified activity {Scan Item, Scan UCard, Issue, Renew, Discharge, Pay Fines, Return UCard} [7 total]
 - Don't penalise plausible additions, e.g. Present UCard, Present Item, Return Item
 - 1 point for a single entry node and at least one exit node [2 total]
 - Multiple exit nodes are allowed, and are deemed equivalent
 - 1 point each for abort flows showing how each scan may fail [2 total]
 - 1 point each if flows eventually reach Issue, Renew, Discharge [3 total]
 - 1 point each if flows to {Issue, Renew} scan both UCard and Item, whereas flow to Discharge scans only the Item [3 total]
 - 2 points for showing optional flow to Pay Fines, and that fines must be paid before Discharge can complete [2 points]
 - 1 point for showing flow to Return UCard only after {Issue, Renew} [1 total]
 - 2 points for variable assignment distinguishing success, failure outcomes [2 total]
 - The name "result" is not significant; but variable must be set before the exit is reached
 - 1 point if guards are true/false exprs in [] square brackets; 1 point if they are mutually exclusive; 1 point if they are exhaustive at each branch [3 total]