AML5103 | Applied Probability and Statistics | Coding Problem Set-2

1. Consider the following model for a bus-ridership analysis:

   - at each stop, each passenger is likely to get off the bus independent of others with a 20% chance;

   - at every stop, there is a 50%/40%/10% chance of 0/1/2 passengers getting on board;

   - the bus never gets full; new passengers at any stop can always be accommodated;

   - bus is empty when it arrives at the first stop.

   Write an R code to calculate using simulation the probability that the bus is empty after visiting the tenth stop.