Sometimes it is necessary to know an extra link from a node (or this is the case) we need an extra link from a node, too. 

- hash table for state names 
- symbol table for actions 
- a linked structure for transition system 

If the linked structure is an adjacency list:

need a modest number of actions. So we need a modest number of actions, but usually there are only states, but usually there are only names. There may be a huge number of states or real/symbolic action and state from a jobs specification, we need to keep generalizing a transition system, for example are the action names, too. But when typically state names are names as

Exercise 1: Some solutions
In this case, the order cannot change. So, in this case, AB works correctly. As reusings are caused by too fast timeouts, duplicates are handled in the same way. In this case, after AB, the second line is known that 1 cannot be a duplicate and sends it to the upper layer.

3. Bit hashing (see lecture).

The hash table should be based on both a tree and an ordinary table. When searching in the table, hence, use one could use either number or name. The symbol table for actions shows real names and the corresponding numbers.

(Continues)
Let us use signals! Although other solutions are possible, too. Signals are virtual messages sent from one process to another. They do not correspond any real messages. Their only purpose is to force the global state graph to take unrealistically unrealistic or behaviours.

For example, not allowing some form.
So the timer does not timeout too early. The signal $S_1$ shows that an acknowledgement has been lost whereas $S_2$ shows the same for a data message.