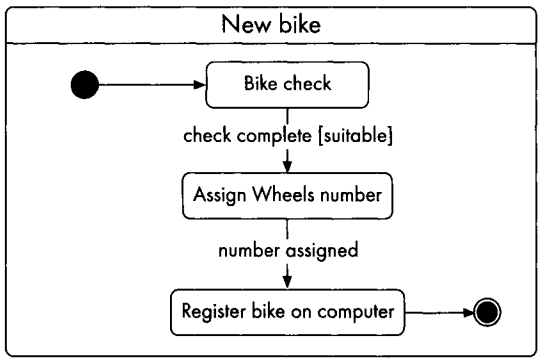

Figure 7.13 *New bike state showing internal nested substates*

to study the internal detail. Notice that the events and states within 'New bike' have their own start and stop states. The nested state diagram can be referenced in the higher level state using the keyword 'include'. For more details about nested substates, see Bennett *et al.*, (2002), Chapter 11.

Concurrent state diagrams. Sometimes the behaviour of an object depends on two independent sets of substates. For example, in a more complex version of the original Job Application state diagram (see Figure 7.6), there might be a set of substates dealing with setting up an interview, and a parallel set of substates to do with obtaining references. This can be shown by drawing a concurrent state diagram – see Figure 7.14. For more details about concurrent states see Fowler (2000), Chapter 8, and Bennett *et al.*, (2002), Chapter 11. It is important to remember, however, that too much detail in one diagram can make the diagram cluttered and difficult to read; it is often simpler and more effective to draw separate diagrams.

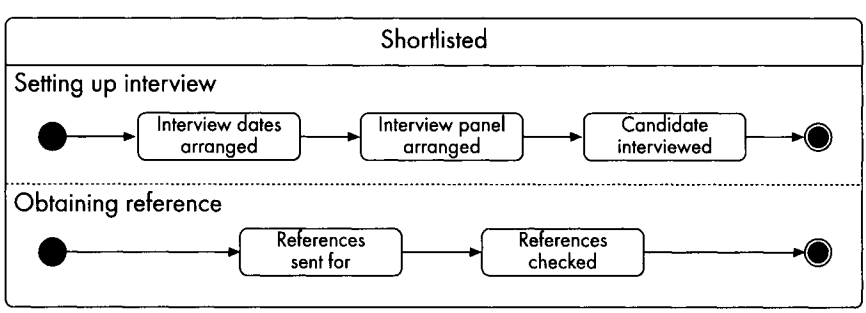

Figure 7.14 *Concurrent state diagram for the 'Shortlisted' state in the Job Application example*