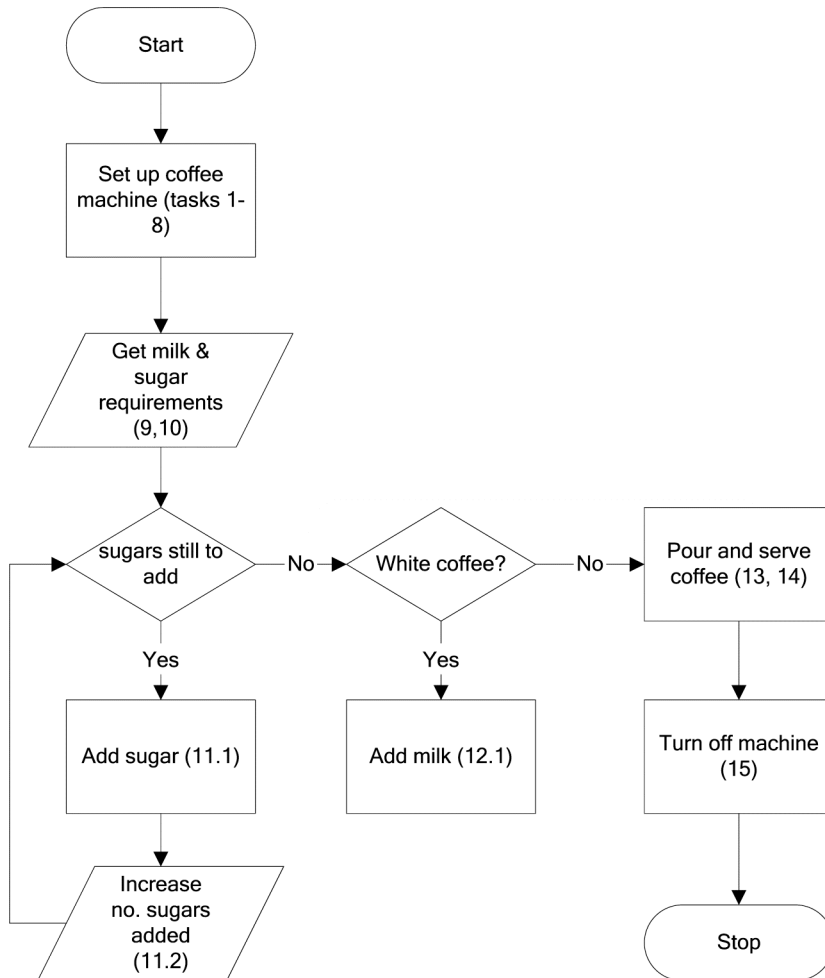


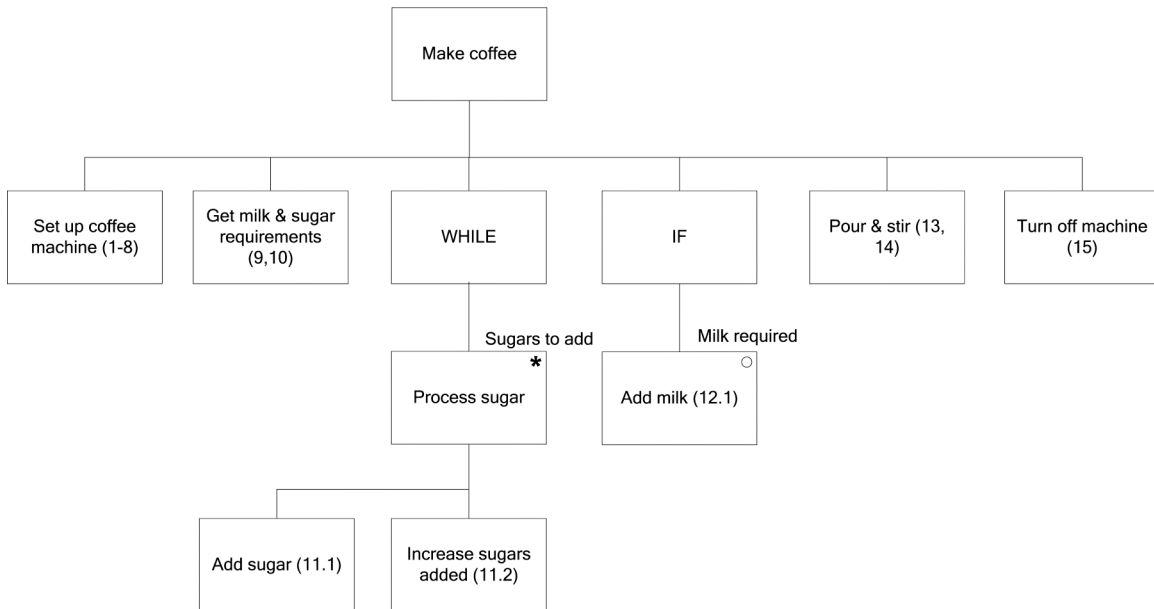
Chapter 8

End of Chapter Exercises

1. *Draw a flowchart for the coffee making solution in Solution 4.9.*



2. *Draw a tree diagram of the coffee making solution in Solution 4.9.*



3. *Try drawing flowcharts, tree diagrams, and state transition diagrams for some of the algorithms you have developed in the exercises in previous chapters. Alternatively, use the various algorithm solutions in Appendix C as the basis for your diagrams.*

No solutions given as it depends on which algorithms you have chosen.

4. *Think about buying a book or a CD from an Internet store. Identify what the principal components of the transaction are and then draw a data flow diagram showing how the various data items (including physical objects such as books) flow between the main players in the situation. Do not restrict yourself just to the store and the customer – think about who else might be involved.*

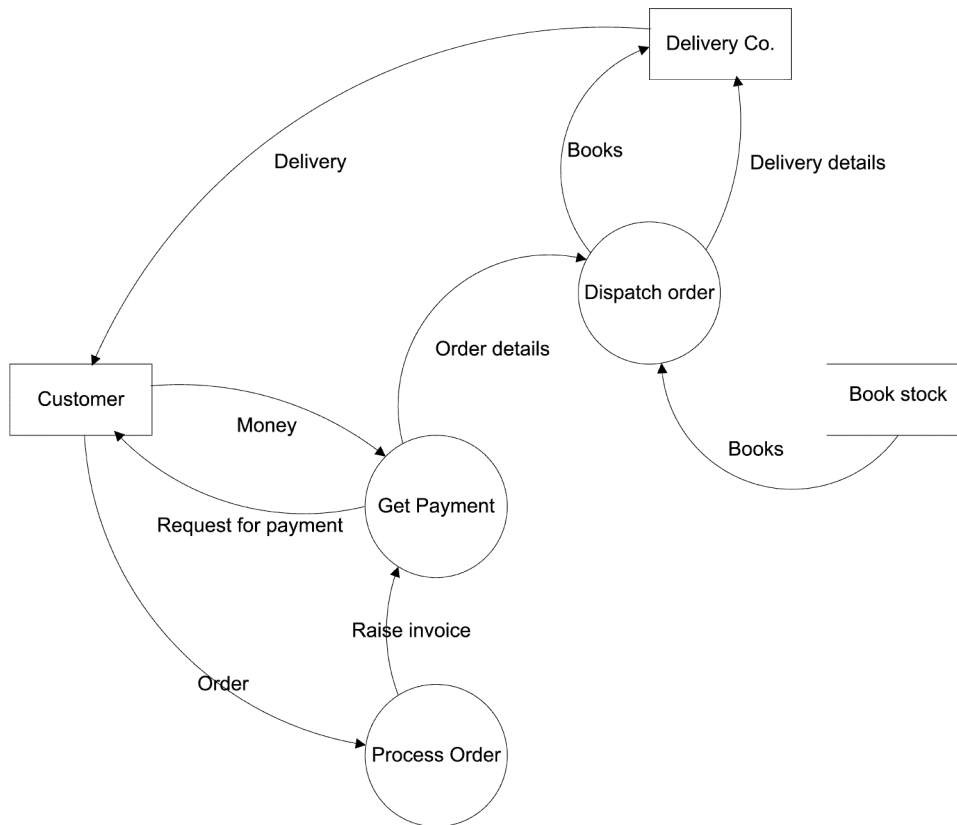
This could be as rich and as complex as you like, but here's a simple set of principal components to get you thinking.

Possible principal components:

- Shop
- Customer
- Supplier
- Delivery company
- Books
- CDs
- Money

DFD

Again, the DFD could be quite rich in showing all nuances of the transaction process. But here's a simple DFD to give you the idea.



We still need to work out what do do about the supplier. Also, without some really thorough systems analysis and in-depth investigations I cannot be sure that the processes shown in the DFD are the right ones. The best I can say about it is that it seemed like a good idea at the time!

5. *Find a book on UML in your nearest library. What sort of programming paradigm is it best suited to?*

An object oriented language such as Java.

Projects

No solutions provided as they are highly dependent on how you have structured your own solutions over the previous chapters.