

Requirements Specification: State Modelling – 1

Important note: Your submission for the practical should be typed and you should use Together Control Center to generate the class diagrams in question 3.

1. Describe the CRC approach to class discovery. What are its advantages over the other approaches to class discovery?
2. A credit card company with 6.5 million cardholders has arrangements with 500,000 retailers who accept the cards. The retailers include hotels, shops, travel agencies, garages and restaurants. When a cardholder wishes to buy something, he or she presents the card to the retailer. If the sale is for more than £50, the retailer then telephones that credit card company to check that the customer has sufficient credit. If the sale is authorised, the transaction is carried out using a 2-part voucher, which records details of the customer, the retailer and the transaction. Details of the transaction are also included on the monthly statement, which is sent to the cardholder.

Using the information in the above paragraph, prepare a list of nouns that may be useful as classes. Go through your list and reject any nouns that will not make useful classes giving reasons for each rejection. List the nouns that you retain as classes and identify possible attributes for those classes.

3. Draw a class diagram using Together Control Center to represent the information in the following paragraph. Where appropriate, your diagram should include association, aggregation, inheritance and multiplicity.

Fit for Life is a chain of health clubs, each with two sections: exercise and beauty. People can join the club as full members or part-time (in which case they are only allowed to use the facilities at certain times). The exercise section of each club has a gym and a swimming pool. Members can use these on a casual basis, but they have to make appointments for treatments in the beauty clinic, such as massage, facial or mud bath. Each club in the *Fit for Life* chain also has a restaurant, which is open to club members and the general public.