Practical 4: Concepts of Object Orientation

1. What is an association? Explain why an association might exist between two classes. During which phase of the software development lifecyle are associations identified?

2. What is the difference between aggregation and generalisation? Give examples to illustrate your answer.

3. Identify some of the classes you would expect to find in the following systems. List sample attributes and operations for the classes you identified.

   a) A system that manages hotel bookings
   b) A system for a library

4. Describe what kind of relationships (e.g. associations, aggregation/composition, generalisation) exist between the following classes.

   a) Village, street, house, shop, road, pavement
   b) University staff, academic, administrator, technician, domestic
   c) Zoo, animal, bird, mammal, reptile, cage, keeper