

The University of Melbourne
Department of Computer Science and Software Engineering
433-254 Software Design
Semester 2, 2003
Solutions - Tutorial 2
Week 3

1. Explain the object-oriented paradigm and how does it differ from the structured paradigm of software development?
2. What is meant by a *software crisis*? Many argue the need for a new programming paradigm, why is this? Explain how the object-oriented paradigm attempts to overcome this *software crisis*.
3. Explain the terms object and class for OO programming (use examples)
4. Define the following OO related terms:
 - (a) Encapsulation
 - (b) Data abstraction
 - (c) Inheritance
 - (d) Multiple Inheritance
 - (e) Polymorphism
5. What is software reuse? What is the difference between reuse and porting? What are the factors influencing software re-use?
6. Identify reusable components in software and discuss how OOPs help in managing them.
7. What are the pros and cons of web-based applications compare to stand-alone applications?