

PRIFYSGOL CYMRU; UNIVERSITY OF WALES

DEGREE EXAMINATIONS JANUARY 2002

SWANSEA

Computer Science

CS 134 Professional Issues and Software Engineering

Attempt 2 questions out of 3

Time allowed: 2 hours

Students are permitted to use the dictionaries provided by the University through the invigilators

CS-134
PROFESSIONAL ISSUES AND SOFTWARE ENGINEERING
Attempt 2 questions out of 3

Question 1

- (a) Describe the main provisions of the Data Protection Act 1998. Include in your answer an explanation of the purpose of the Act, the areas it covers, the Data Protection Principles, the rights of individuals, and the function of the Information Commissioner.
[10 marks]
- (b) Briefly describe the major legislative provisions for the protection of Intellectual Property Rights.
[9 marks]
- (c) A British university employs a programmer from Germany on a one-year contract. The main project the programmer works on is a system to construct the examinations timetable. The system is successfully implemented. At the end of the contract the programmer returns to Germany and takes a copy of the source code for the examinations system, with a view to selling it to German universities. The programmer does not see any problem with this since the program will have to be amended to handle both a different language and the differing requirements of a German university. Discuss the legal and ethical issues that arise in this example.
[6 marks]

Question 2

- (a) The waterfall model (or 'classical' model) of software development was introduced to improve software development techniques. Describe the waterfall model of software development and indicate its strengths and weaknesses.
[10 marks]
- (b) Discuss prototyping as an alternative to the traditional waterfall approach to software development.
[9 marks]
- (c) What is the Capability Maturity Model and what purpose does it serve?
[6 marks]

Question 3

Discuss the problems of project planning and control. Include in your answer an outline of the principal tasks of a software project manager, as well as a brief description of some of the project management tools available and their relative usefulness.
[25 marks]