



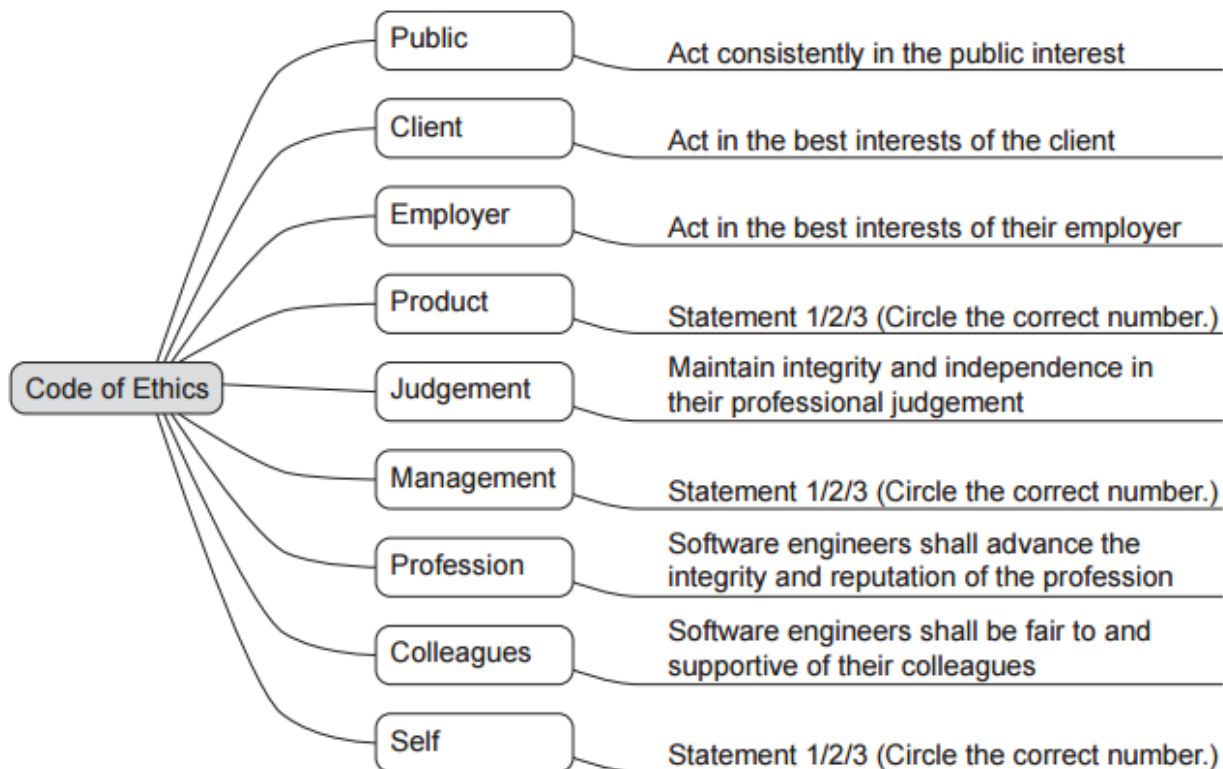
1.7.1 Ethics and the Computing Professional

Computer Science (9608)

May/June 2015.P11-Specimen Paper

6 The ACM and IEEE set out eight principles for ethics and professional practice.

The categories, with a short explanation, are shown in this diagram.



Statement 1

Team leaders should subscribe to and promote an ethical approach to the management of software development and maintenance.

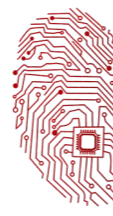
Statement 2

Software engineers shall participate in lifelong learning regarding the practice of the profession.

Statement 3

Software and related modifications meet the highest possible standards.





1.7.1 Ethics and the Computing Professional

(a) These **three** statements need to be added to the diagram.

Circle the correct numbers on the diagram to indicate the positions for Statement 1, Statement 2 and Statement 3.

[2]

(b) For each of these three workplace scenarios, unethical behaviour is demonstrated.

Explain the principle(s) which are not being met.

(i) Workplace scenario 1

A large project is devolved to project teams, each led by a project leader. One project leader fails to inform his manager that he has major concerns that:

- their team's software contribution is taking much longer to write and test than anticipated
- they are consequently at risk of spending over their allocated budget.

[3]

(ii) Workplace scenario 2

The software house is about to train a number of programmers in a new programming language. Two employees are refusing to attend the training.

[2]

(iii) The company is developing some monitoring software which requires sensors placed in a nature reserve. One employee considers the sensors will be a danger to some of the wildlife, but is told by his manager that the matter is none of his concern.

[2]

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4 Paul works part-time for a large software company. The company sells security software to a number of banks. He also runs his own software company that produces and sells computer games.

Six statements about computer ethics are shown below.

Draw lines to indicate whether each statement describes ethical or unethical behaviour.





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To save time, Paul fakes the test results when testing the bank security software.	
Paul uses the software developed in his day job to help write some of the games software routines.	
To allow him to concentrate on his games software, Paul has frequently turned down job opportunities in his day job.	Ethical
To make the games software more realistic, Paul uses password protection code used in the bank security software.	
Because his work load is increasing, Paul is now using overseas companies to write some of the routines used in his games software.	Unethical
Paul carries out training on how to write games software in his spare time.	

[6]

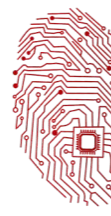
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5 Bobby is a senior programmer at a software house which produces intruder detection software. He also runs his own software company which develops and sells various computer applications.

The following table shows seven activities which Bobby carries out.

Put a tick (✓) in the appropriate column to identify if the activity is ethical or unethical.





1.7.1 Ethics and the Computing Professional

Activity	Ethical	Unethical
Gives away passwords used in the intruder detection software		
Uses source code developed at the software house for the software he develops for his own company		
Insists that staff work to deadlines		
Turns down training opportunities offered by his employer		
Writes and sells software that reads confidential data from client computers		
Fakes test results of safety-critical software		
Has the software applications developed overseas for sale in his own country		

[7]

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6 A team of software engineers is developing a new e-commerce program for a client.

State **three** of the principles of the ACM/IEEE Software Engineering Code of Ethics. Illustrate each one, with an example, describing how it will influence their working practices.

[6]

