ALevel CS C10 Ethics and ownership

BCS(British Computer Society) guidance:
1. Public Interest
2. Professional Competence and Integrity
3. Duty to Relevant Authority
4. Duty to the Profession

IEEE/ACM (Institute of Electrical and Electronics Engineers)/Association for Computing Machinery eight principles:
1. **PUBLIC** – Software engineers shall act consistently with the public interest.
2. **CLIENT AND EMPLOYER** – Software engineers shall act in a manner that is in the best interests of their client and employer consistent with the public interest.
3. **PRODUCT** – Software engineers shall ensure that their products and related modifications meet the highest professional standards possible.
4. **JUDGEMENT** – Software engineers shall maintain integrity and independence in their professional judgement.
5. **MANAGEMENT** – Software engineering managers and leaders shall subscribe to and promote an ethical approach to the management of software development and maintenance.
6. **PROFESSION** – Software engineers shall advance the integrity and reputation of the profession consistent with the public interest.
7. **COLLEAGUES** – Software engineers shall be fair to and supportive of their colleagues.
8. **SELF** – Software engineers shall participate in lifelong learning regarding the practice of their profession and shall promote an ethical approach to the practice of the profession.

As a professional you could be guided in your thinking by referring to the eight principles listed above from the IEEE-CS/ACM Joint Task Force Software Engineering Code of Ethics.

Artificial intelligence(AI): AI concerns the use of a computer or computer-controlled device to perform tasks normally associated with intelligent behaviour by humans.

AI usages:
1. the use of a language
2. carrying out a mathematical calculation or function
3. recognising a person's face
4. the ability to operate machinery, such as a car, an aeroplane or a train
5. analysing data to predict the outcome of a future event, such as weather forecasting.

AI covers areas:
1. autonomous (driverless) vehicles
2. artificial limb technology
3. drones, used to carry out dangerous or unpleasant tasks such as bomb
4. disposal, welding, or entering nuclear disaster areas
climate change predictions
5. medical procedures, such as eye operations where extreme precision is required.

The impacts of AI:
1. 99% of all jobs could be eliminated since the increase in the use of AI is exponential
2. An increase in AI will leave people with more time to pursue their hobbies and have a better lifestyle.
3. Improvements in AI technology can have a positive impact on the environment.

Copyright: a formal recognition of ownership of a created and published work

Copyright can apply to any of:
1. a literary (written) work
2. a musical composition
3. a film
4. a music recording
5. a radio or TV broadcast
6. a work of art
7. a computer program.

Commercial software

Shareware: software provided **free of charge for a limited period** but **no source code provided**

Freeware: software provided **free of charge with no time limit** for its use but **no source code provided**

Open or free licensing:

Open source software: software **provided with the source code**

Free software: software provided with the source code when the user is **free to use it as they wish**