

# Topic 1.6 | GCSE Computer Science | Ethical, Legal, Environmental, Cultural Concerns

Legal	Cultural
<p>Computer use has brought new concerns and new crimes. With the rise of the internet, computers are increasingly being used for illegal activities. Computers might be used unlawfully in many ways, for example:</p> <p>Allowing someone to <u>illegally share personal data</u> helping to steal financial <u>information</u>, such as credit card numbers or bank account details,</p> <p>⇒ Helping to illegally copy and share films, television programmes and music extorting information or black-mailing someone.</p>	<p>The introduction of computers has changed society, sometimes for the better, sometimes for the worse. 'Cultural issues' is the term used for computer matters that have an effect on the nature and culture of society. Some of these issues include:</p> <p>⇒ the digital divide</p> <p>⇒ <u>the changing nature of employment</u></p> <p>EG: Many companies now allow employees to work from home and communicate with them via technology. Not all cultures have open access to technology.</p>
Ethical	Environmental
<p><u>Ethics</u> are <u>moral principles</u>, or <u>rules</u>, which govern a person's <u>attitudes and behaviour</u>. Ethics apply to the use of computers as much as they do to other things in life. Ethical issues in computing include: Ensuring public safety,</p> <p><b>Ensuring public safety</b></p> <p>As new technologies are introduced, they bring safety concerns. For example, <u>driverless cars</u> may soon be on the roads in the UK. The designers of driverless cars have not only had to ensure the safety of passengers, but also of other drivers and pedestrians.</p> <p>How would a driverless car choose between a pedestrian and the driver. How would we choose? <b>A computer doesn't know the difference between right and wrong! We have to program it.</b></p>	<p>Environmental issues are those where the manufacturing and use of computers has had a <u>negative impact on the environment</u>. Resources are needed in order for computers to be produced.</p> <p>Many computer components are either <b>hard to recycle</b> or <b>contain toxic materials</b>, such as lead. Also, users discard ICT equipment quite quickly:</p> <p>⇒ People have new smartphones every couple of years</p> <p>⇒ Many organisations replace computers after three or four years</p> <p>Many people <b>replace older technology</b> before it fails simply because they perceive it to be old-fashioned or out of date.</p>

<b>E-Waste</b>	The disposal of digital waste.
<b>Ethics</b>	A system of moral principles, often shown by doing things that society recognises as being good or by acting in ways that individuals and societies think of as reflecting good values
<b>Lawful</b>	Abiding by laws and rules of a particular country or area.
<b>Legislation</b>	Laws.
<b>Digital Divide</b>	People without access to technology, or those who don't know how to use it, are at a disadvantage to those who do.
<b>Hacking</b>	The unauthorised access to a computer system and the data it contains.
<b>Copyright</b>	This is a law protecting the rights of the person who created their work to only use themselves.
<b>Patent</b>	Having a permission granted by a government to a person for a set period of time to stop other people from making use of their investigations without their permission.
<b>Open source</b>	Software whose source code is available for modification or enhancement by anyone, eg, open office, Linux, Android.
<b>Proprietary</b>	Software whose source code is not available for modification.

**Data Protection Act**—Legislation passed by parliament that governs the protection of personal data in the UK.

**Computer Misuse Act**— Defines and criminalises a number of offences involving the use of a computer, e.g. unauthorised access to computer systems.

**Freedom of Information Act**—Laws introduced to give the public the right to access information recorded by public sector organisations