

# TERM 2

## Lecture 1 – Professions + UK Law

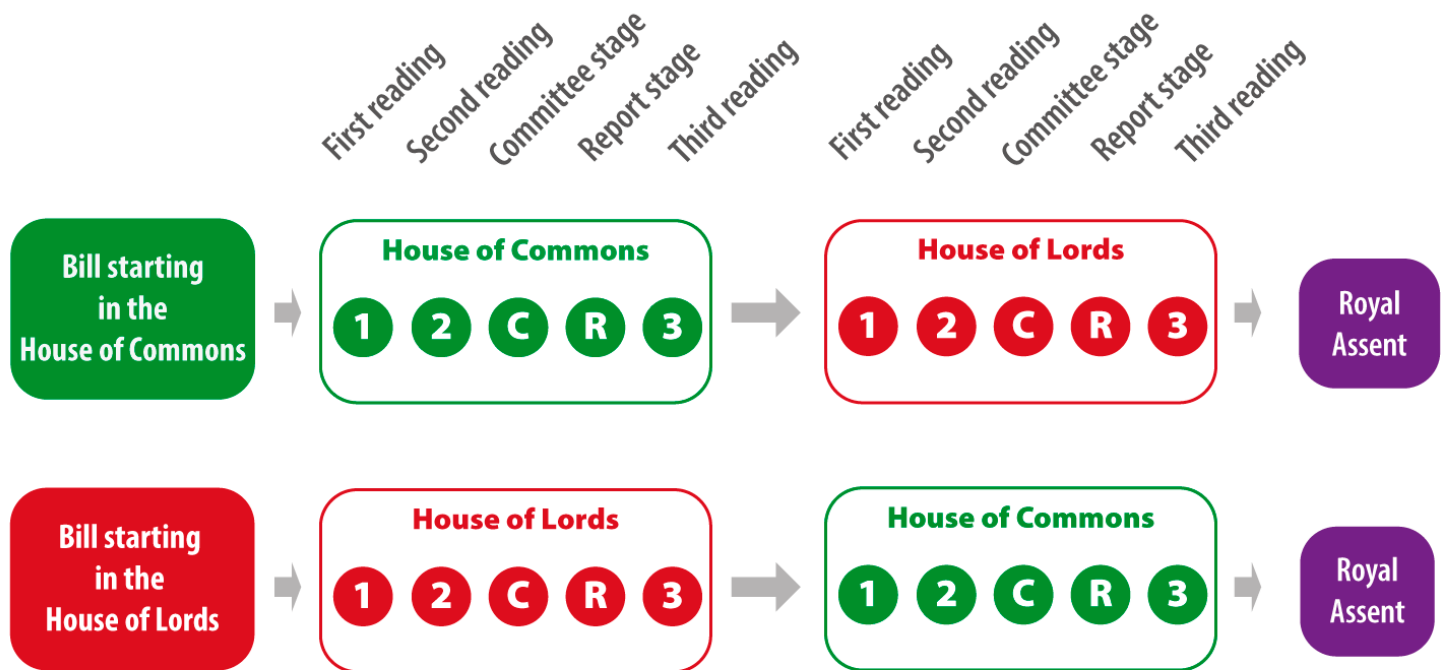
- Profession = an occupation in which a professed knowledge of some subject is applied, especially one that involves prolonged specialist training and a formal qualification; or the body of people engaged in such an occupation
- **Entry to a profession is often regulated by a body (made up of members of that profession; e.g. IEEE, ACM, BCS, GMC, IET) — **some titles** (e.g. Architect, Paramedic) **and functions** (e.g. only certain people can take money (or other compensation) in exchange for performing surgery or teaching driving) **are protected by law (with professional bodies being given powers in law to control who can use that title or carry out that function)**
  - In the UK we tend to protect functions and let people invent and use whichever titles they like
  - **Engineer is not a protected title in the UK but Chartered Engineer is (this applies for lots of titles e.g. (Chartered) IT Professional, (Chartered) Accountant)** — some safety critical variations e.g. gas engineer are protected, these titles tend to allude to the reserved function you are carrying out**
- Engineering council established 1981 following Finniston Report
- BCS was established in 1957
- IEEE-CS (Institute of Electrical and Electronic Engineering Computer Society) was founded in 1946
- ACM (Association for Computing Machinery) was founded in 1947
- **BCS code of conduct:**
  - **Four duties**
    - **Public interest**
      - Protect public health, the environment, and the privacy, security, and wellbeing of people (natural persons and organisations)
      - Not engage in discrimination on the grounds of protected characteristics
      - Promote equality in access to technology and careers in it
    - **Professional competency and integrity**
      - Only undertake work you are competent to do
      - Do not lie about your competence
      - Develop your knowledge and skills on a continual basis, keeping abreast of developments relevant to your field
      - Understand and comply with all relevant legislation
      - Respect other people's viewpoints
      - Seek, accept, and offer honest criticisms
      - Avoid injuring people, their property, or their reputation
      - Reject and do not make bribes
    - **Duty to the relevant authority (the person and/or organisation you are currently carrying out your profession for)**
      - Carry out your profession with due care and diligence
      - Avoid situations that could create a conflict of interest with your relevant authority
      - Take responsibility for your work and for that of colleagues you are supervising
      - Do not disclose confidential information unless you either have permission or are complying with a statutory requirement

- Do not misrepresent or withhold (unless it is confidential) information or take advantage of the lack of knowledge of others

#### ■ **Duty to the profession**

- Uphold the reputation of the profession — do not take actions that could bring the profession into disrepute
- Uphold the reputation of the BCS
- Participate in the development and use of professional standards
- Act with integrity and respect in your professional relationships
- Support fellow members in their professional development
- Unless you particularly want to refer to yourself as a Chartered Computer Scientist or similar, which there is very little reason to need to, being expelled the BCS for breaking their code of conduct will have minimal impact on your life — stark contrast to medics and the GMC
- When we talk about UK law we are typically talking about England and Wales but not Scotland and Northern Ireland, Isle of Man, Guernsey, and Jersey — in practice Scotland and Northern Ireland have very similar laws to England and Wales whereas the islands have larger differences in their laws
- **Laws = a set of rules that can be enforced in court**
- **“English” criminal law has jurisdiction over England and Wales and deals with crimes** (malicious acts carried out with malicious intent) — state (CPS in the uk) vs person
- **Civil law settles disputes between people (people in this context includes companies etc. as well as natural persons)** e.g. breach of contract, injury at work etc. — person vs person
  - it is nearly always in the best interests of both parties to resolve these kinds of issues outside of court
- To be found guilty of a criminal offence requires guilt to be proven beyond reasonable doubt whereas to win a civil only requires your claim to be more likely than not
- In civil cases there is no presumption of innocence like there is in criminal cases
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- **Common law is not a series of written laws (statue) but instead the traditions of the UK judicial system based on the judgements made by judges over the centuries (precedents)**
- **Statute law is created by acts of parliament (legislation)**
- **How a bill becomes statute:**
  - **First reading** – no debate, simply makes people aware of the existence of the bill, mainly symbolic
  - **Second reading** – general debate and vote
  - **Committee stage** – detailed line by line **scrutiny** from top to bottom **and amendments**
  - **Report stage** – further **scrutiny and amendments**
  - **Third reading** – further scrutiny (HoL only), **final vote**— if passes vote becomes an **Act of Parliament**
    - If started in HoC and HoL make amendments in third stage, HoC have to vote again
  - **The above happen in the house the law started in and then in the other house**
  - **Royal Assent** — the **Act of Parliament becomes a law**
  - Most bills start in HoC

# How does a Bill become a law?



Source: Parliament UK

## • Level of court in the England and Wales

- **Magistrates** — lay people, deals with civil and criminal matters
- **County court** — deals with civil matters not suitable for magistrates, judge but no jury
- **Crown Court** — serious criminal matters and appeals to decisions from magistrates — judge and jury (of 12)
  - Jury determine guilt, judge determines sentence and ensures trial is fair
  - Defendants in matters on the more serious end of what can be dealt with by magistrates can request to have their case tried in front of a jury causing their case to be tried in crown court instead of magistrates
- **High Court** — complex civil cases and appeals to decisions from county court
- **Court of Appeal** — appeals to decisions from high court or crown court — judge but no jury, three hear each case
  - Traditionally, the UK's highest level of court
- **Supreme Court** — appeals to criminal or civil decisions from court of appeal, especially cases where the precedent set has the potential to be of national/constitutional relevance — judge (most of whom are law lords) but no jury, usually 5 hear each case but more do for especially important ones
  - Established in 2009

## Lecture 2 – Wellbeing

## Lecture 3 – Internet Ethics

- Ethics = the principles governing/guiding the conduct of an individual or group
- Moral = the distinction between right and wrong in relation to the actions, desires, or character of human beings

- Morals related to things that are generally accepted as being clearly either right or wrong (within a certain sociopolitical context) whereas ethics relates to processes for making decisions where the morality is not necessarily clear
- **Consequentialist theories of ethics judge acts on their outcomes (e.g. Utilitarianism)**
- **Deontological (duty) theories of ethics judge acts on their motivation (e.g. Kant)**

## Lecture 4 – IT Related Legislation

### Data Protection Act

- The council of Europe Convention on Data Protection led to the Data Protection Act 1984
- The EU Data Protection Directive led to the Data Protection Act 1998
- The EU General Data Protection Regulations led to the Data Protection Act 2018
- **Personal data = data stored and processed that relates to a data subject**
  - Since 1998, this is not necessarily computerised storage/processing
- **Data subject = an identifiable natural person (i.e. not a company)**
- **Controller = person, authority, or body which determines the purposes and means of processing personal data**
- TO DO: GDPR article 4
- TO DO: A-level notes and website
- Extraterritoriality — GDPR applies to controllers anywhere in the world who are collecting data about an EU resident (or now UK)
- **Maximum penalty for data breach is €10m or 2% of global gross revenue**
- **Maximum penalty for violation of legal obligations is €20m or 4% of global gross revenue**
- All public authorities, entities involved in regular and systematic large scale monitoring of data subjects, and entities conducting large scale processing of special category personal data must have a data protection officer — tends to be best to have one just in case ICO feel you do fall into one of these categories
- There is an understanding that **data breaches are impossible to prevent but organisations are expected to take a risk based approach — you are expected to take all measures that are reasonable/proportionate** to the probabilities of different magnitudes of data breaches but not measures for which the costs outweigh the benefits (i.e. the amount of risk removed)
- **Data breaches must be reported within 72 hours**
- **7 principles of data protection**
  - **Processing of personal data must be lawful, fair and transparent**
    - **Lawful basises:**
      - **Necessary for performance of a contract**
      - **Legal obligation of controller**
      - **“Vital interests” of data subject**
      - **Public interest or official authority**
      - **Consent of data subject** — consent must be freely given, specific, informed, unambiguous and demonstrable
      - **“Legitimate interests” of controller** — iff none of the above apply but you feel you can still justify it to the relevant authorities
  - **Purposes of processing of personal data must be clear and explicitly specified and must be legitimate**
  - **Personal data must be adequate, relevant and not excessive**

- **Personal data must be accurate and kept up to date**
- **Personal data must be kept for no longer than is necessary**
- **Personal data must be processed in a secure manner**
- **The controller is accountable**
- **Rights of the data subject**
  - **Access to data held about them (within 1 month)** — subject access request
  - **Rectification of incorrect data**
  - **Erase (commonly known as right to be forgotten)**
  - **Restriction of processing**
  - **Data portability**
  - **Objection to automated decision making**
    - Can opt out of automated processing that has a material impact on their life — right to human review
  - Exemptions:
    - Lawyer-client confidentiality
    - Tax records
    - Self-incrimination
    - Immigration
    - Journalism
    - Research
    - Parliamentary privilege
    - References for employment
    - Exam scripts and marks
    - Social work
    - Health data
- **TO DO: Data protection schedules**
- **Completely excluded from DPA:**
  - Domestic purposes
  - Law enforcement — EU would like to change this
  - National security

## Freedom of Information Act

- **Applies to all public bodies in the UK**
- **Requests must be made in writing** (e.g. letter, fax, email)
- **A fee may be charged**
- **Time limit of 20 working days**
- **Exemptions**
  - **Absolute**
    - **Security**
    - **Trade secrets**
    - **Court records**
    - **Malicious requests e.g. clear attempts to waste time and resources**
  - **Qualified**
    - **The disadvantages of the data being publically available outweighs the advantages of the data being publically available**
    - **Public interest**
- **Most of the time DPA overrides FOIA where the two conflict**

- **Organisations can work with ICO to provide publication schemes — lists of information that has been published or will be published** — prevents people from having to make FOI requests and you having to respond to FOI requests

## Computer Misuse Act

- CMA was introduced following the 1987 case of Regina vs Gold and Schifreen which involved the use of credentials stolen by shoulder surfing
  - After the conviction was overturned due to no current laws applying the government realised it needed a computer related law to avoid the same issue occurring in the future
- Computer system = any device or group of devices, in which one or more is carrying out a program of instructions in order to automatically process data
- Computer data = any representation of facts, information, or concepts in a form suitable for processing in a computer system, including instructions to cause a computer system to perform a function
- **Section 1: Unauthorised access**
  - **It is an offence to cause a computer to perform any function with the intent to secure access to any program or data held in any computer if you know the access is unauthorised**
  - **Maximum penalty is 2 years imprisonment or £5000 fine**
  - Other CMA offences often end up getting downgraded to this
- **Section 2: Unauthorised access with intent to commit or facilitate commission of further offences**
  - The further offence must carry a punishment of at least 5 years
  - **Maximum penalty is 5 years imprisonment and unlimited fine**
  - It is not necessary for the further offence to have actually been committed (or it to have been possible to commit in the end)
- **Section 3: Unauthorised acts with intent to impair or that recklessly impair the operation of a computer**
  - **Maximum sentence is 10 years imprisonment and unlimited fine**
- **Section 3ZA: Unauthorised acts causing or creating a risk of serious damage**
  - **Maximum sentence is 14 years imprisonment and unlimited fine**
  - **Maximum sentence if the damage is to human welfare, national security etc. is life imprisonment**
- Extraterritoriality
- Police and Justice Act 2006 amends CMA to make denial of service attacks definitely illegal (as they don't cause any permanent damage/impairment), make CMA offences extraditable, and make possession and distribution of CMA offences related tools illegal

## Regulation of Investigatory Powers Act 2000

- **Businesses can record and monitor data without explicit consent (but having made reasonable efforts to inform people it is taking place) to:**
  - **Ensure procedures are being followed**
  - **Set and maintain standards**
  - **Comply with regulatory requirements**
  - **Prevent and detect of crime**
  - **Ensure the continued functioning of the communications system**

- Interception of data is illegal (other than as described above) unless you have a warrant — if someone has a warrant you must give them reasonable assistance in their interception
- Encryption keys must be surrendered under certain circumstances
- Investigatory Powers Act 2016 ...

## Other

- In the EU and UK an ISP cannot be held liable for the results of a transmission if they were acting as a mere conduit (did not initiate the transmission and did not select the receiver of the transmission and did not select or modify the information contained in the transmission and did not store the information transmitted for longer than necessary to carry out the transmission)
- In the EU and UK an ISP cannot be held liable for contents of data stored in their caches (even if stored for longer than necessary to complete any one transmission) if they: are only storing it to speed up future requests, did not modify the information, comply with lawful access requests, comply with reasonable update requests, acts expeditiously to remove information from the cache if it has been removed from the source (e.g. by a court seizing a domain name)
- In the EU and UK a host cannot be held liable for the content they are storing if they are unaware that the content is unlawful and act expeditiously to remove it once they become aware it is unlawful
  - Companies will often remove content that somebody complains is unlawful without properly checking if it actually is unlawful as they wish to play it safe — this can raise ethical issues around the suppression of freedom of speech etc
- In the US, hosts (and operators of caches) have the more or less complete immunity provided only to mere conduits in Europe
- In the UK, ISPs can be forced by courts to provide the address of the property that was assigned a given public IP at a given time (e.g. to facilitate connecting a pseudonymous online account to a real world individual) whereas in the US they cannot be other than in very serious cases
- Defamation = making statements that have caused or are likely to cause serious damage someone's reputation
- Slander = spoken defamation
- Libel = written/other non-spoken defamation e.g. letters and emails
- Defamation is a civil offence
- In the UK the following are defences to defamation:
  - The statement is factually true
  - The author/publisher could not have reasonably been expected to be able to ascertain that the statement was not factually true
  - The statement was solely an opinion and was a sincerely held opinion that was a reasonable opinion to have held given the facts available at the time at publication
  - The statement relates to a matter in the public interest and the defendant reasonably and sincerely believed the publication of the statement was in the public interest
- In the US, the statement several of the above are defence but not having made the statement maliciously is also a defence whereas it is not in the UK
- Since 1959, possession (with intent to view and/or publish) of obscene material (material likely to corrupt people who are likely to see/read/hear it e.g. extreme porn or allowing minors to access porn) has been a criminal offence instead of a civil offence
  - Possession of CSAM is illegal without needing to prove any intent to do anything with it
- Since 2008, possession (without necessarily any further intent) of extreme porn (visual material that depicts in an explicit and realistic way: necrophilia, bestiality, acts that endanger life, actors that are likely to result in serious injury, non-consensual penetration) has been illegal

- This does not apply to material with an 18R certificate
- Defences: Could not be reasonably be expected to know it was extreme, was sent it without consent and deleted it as soon as possible, you are in the material AND the extreme acts were not actually carried out
- Despite being more socially conservative, America has laxer porn laws than Europe due to the first amendment
- In the EU and UK it is illegal to transmit or cause the transmission of unsolicited direct marketing emails except when:
  - In the course of the sale or negotiations for the sale of a product or service to the recipient
  - The message relates to products and services you have reason to believe the recipient could be interested (i.e. is targeted) AND the recipient can opt out

## Lecture 4 – Intellectual property

- Intellectual property law protected intangible property — the theft of intellectual property does not deprive the owner of the the property like it does with tangible property but does deprive them of profits
- **Copyright = the right to copy or adapt a work (and by extension the right to prevent others from doing so)** — by default belongs to author but can be given to others
  - **Copyright applies automatically, there is no need to register and people typically don't**
  - **Was originally "original literary, dramatic, musical, or artistic works" — Copyright, Designs and Patents Act 1988 — amended in 1992 to define literary works to include source code for computer programs and design documents and in 1997 databases if the data contained required substantial investment to collate** — note this means non-original aspects of source code are not protected
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  - Copy has a broad meaning, the copy can be transient
  - **Berne Convention 1886 — Lasts life + 50 years**
  - **In UKUSA now lasts life + 70 years — for multiple authors, it is the last death that is relevant**
  - **Databases only last 15 years**
    - New information added to the database has its own 15 years
  - Copyrightable work in a database copyrightable for the full life + 70 years, the 15 years applies to databases where any one entry is non-copyrightable (e.g. a matter of fact) but the capture, verification, and processing of the quantity of data took a lot of resources
- **Copyright of the work of employees during their employment is automatically the property of the company not the property of the employee** — still lasts based on lifetime of employee though
  - **Contractors own the copyright to their work unless their contract says otherwise** — if employing freelance programmers make sure the contract says otherwise!
- **Material that happens to bare a strong resemblance to copyrighted work but was not made by looking at the copyrighted work is not a violation of copyright**
- **You can make a backup of something you only have a licence for one copy of (in effect giving you two copies) but you cannot make more than one backup**
- **Decompiling software which you own in order to make it more useful for you is permissible if it is the only way of doing so and you do not using the output of the decomposition for any other purposes e.g. to determine how to make it interoperate with other software or to identify and fix bugs in it**



- 2014 — can violate copyright for: archiving, data analysis, research and education, parody, private use, making modified copies for the disabled
  - **ACTA (anti-counterfeiting trade agreement)** was signed by the US, EU, and Japan but only ratified by Japan so far and EU has explicitly stated they won't ratify — **makes ISPs responsible for their users' actions and converts copyright violation from a civil matter to a criminal matter**
  - **EU Directive on Copyright in the digital single market 2019** — **requires online platforms to obtain licences to embed/reproduce (including only snippets) content** (e.g. news stories, music videos) in order to make it easier for content creators and publishers to get a cut of the money social media sites are making due to users sharing content made by others
    - Poland filed a court case in 2019 claiming that it is a censorship law which would violate the polish constitution and EU directives — EU court struck down the case in 2022
  - **Moral rights refer to the right to be identified as an author on a piece of work e.g. a journalist's employer owns the copyright to their work but the author has moral rights**
  - **Can copyright a program but not the underlying algorithm**
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- **Trade mark = a distinctive design related to visual appearance e.g. sign, name, image, icon**
    - **A trade mark only applies to the relevant class of product**
    - **Trade mark infringement is generally a criminal matter but a civil case may also be brought**
  - **Are automatically protected (™) but registering is a good idea (®)**
  - **Domain names are not generally considered intellectual property but when registered maliciously constitute trademark infringement if there is a relevant trademark** — the major difficulty here is that domain names by their nature apply globally whereas **trade marks must be registered in each country separately**
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- **Patent = temporary right to exploit an invention (for 20 years)**
  - **Unlike copyright, a patent prevents people who independently come up with the same idea as you from exploiting it**
  - **In europe to be patentable must be:**
    - **New (no existing prior art)**
    - **Non-obvious (had an "inventive step")**
    - **Have an industrial application**
    - **Not be in an excluded area (e.g. scientific theory, computer program (but is copyrightable), mathematical method, algorithm, aesthetic creation (copyrightable), information presentation (copyrightable))**
      - **A specific application of a method/theory etc. typically is patentable even though the method/theory itself typically isn't**
  - **Unlike copyright and trademarks, patents must be registered — must not become public knowledge prior to registration to be able to register** (because must be new)— will by the nature of registration become public knowledge prior to registration
  - **Software patents are a evolving and very complicated area where what the law says and what actually happens differ but attempts to update the laws have been unsuccessful — furthermore there are differences between the EU and the USA**

- WIPO (World Intellectual Property Organization) is an offshoot of the UN that make it easier to apply for patents in multiple countries at once
- If you wish to keep something confidential for a long period of time you should treat it as a trade secret (use NDAs, contract terms etc) instead of patenting it as patents are public and only protect for 20 years
- **If you wish to keep information confidential that isn't covered by copyright, trademark, or patents use NDAs and contract terms**
- **Public Interest Disclosure Act 1998 allows disclosure of confidential information for whistleblowing**

## Lecture 5 – Finance

- **To start a company you need to think about:**
  - **Business plan**
  - **Capital plan**
  - **Cash flow**
  - **Sources of finance — equity, grants, loans**
  - **Gearing ratio — debt/equity** — the higher your gearing the more you feel booms and busts, bigger risks but bigger rewards
- **On financial documents, convention is to place negative values in parentheses instead of using a negative sign**
- **Balance sheet**
  - **Assets**
  - **Liabilities**
  - **Net worth = assets minus liabilities**
- **Profit and loss account**
  - **Income**
  - **Expenditure**
  - **Change in net worth = income minus expenditure**
- **Cash flow statement**
  - **Profit and loss account but only based on the money that has actually come in and gone out — depreciation etc is ignored**
  -
- Balance sheet is published at the start of the financial year, cash flow and profit and loss are published quarterly typically
- **Double entry bookkeeping**
  - **Every transaction is written down on the left page and the right page — left hand is debits and right hand page is credits — sum of left hand page = sum of right hand page for every double page spread** or something has gone wrong
    - Each transaction is written as a short description, the amount, and the name of the account
- Accounts describe the past, budgets describe the future
- For an interest rate of  $r\%$  over  $t$  years, discount factor =  $(1+r)^{-t}$  — used to estimate the value of an investment based on projected cash flow
  - **Present value = (future value in  $t$  years time) \* discount factor**
- **Statutory requirements**
  - **Annual returns and accounts**

- Must be filed with Companies House and sent to HMRC
- Accounts must be audited (if company large enough)
- Balance sheet, profit and loss account, notes on the accounts
- Directors' report (if company large enough)
- Company register
  - Lists of directors, secretaries, shareholders
  - Held at registered office

## Lecture 10 – Organisations

- **A sole trader does not require any registration (i.e. is automatic) and is personally liable for the business' debts**
- **A partnership does not require any registration (i.e. is automatic) and is a group of (two or more) people in business aiming to make a profit who haven't formed a limited company**
  - **Partnership Act 1890**
  - **Partners have unlimited, joint (and separate in Scotland) liability for the business' debts**
  - Used in regulated professions e.g. law, medicine, architecture as professional bodies believe the liability will encourage people to practise the profession with due care
- **Limited liability Partnership Act 2000 allows the creation of a limited liability partnership**
  - **Liability advantages and some of the reporting requirements of a limited company but without any shares (governed like a partnership)**
  - LLP is a legal person that exists independent of its members
  - Requires registration
  - Must have at least 2 members at all times
  - Members have limited liability for debts of the business — only liable up to amount of money they have invested
  - Members do not own assets of the business
  - An agreement should be drawn up between members describing their responsibilities, how people enter and leave, how decisions will be made, and how profits will be shared but this is not legally necessary
- **A corporation is a legal entity that is distinct from its owners**
- **Limited company**
  - Requires registration but very easy to do
  - A **memorandum of association** must be created, signed by founding shareholders, and deposited with companies house — states that they want to form a company and will each have at least one share — **creates shares and defines initial allocation of them**
  - **Articles of association** must be created — specify: how decisions are made, how directors are appointed, how shares can be transferred, and other such matters — must be deposited at companies house
    - Government publishes a "model" set which most people use as a base and modify where they wish to
  - **Ownership is split into shares which can be traded**
  - Shareholders only liable for debts up to the amount they paid for their shares
  - Required to provide accounts, annual report etc to companies house
  - Directors may be shareholders but don't have to be
    - Must act to protect the interests of the company, the wider community, and the environment

- Must act with due care
  - Must disclose any potential conflicts of interests
  - Must keep abreast of the companies financial position — can be held personally liable for debts they allowed the company to incurred that they should've known it would be unable to pay
  - Must ensure accounts and annual report are created and filled with companies house
- **A plc is a public limited company**
  - **Must have a secretary — often also a director**
  - **Can sell shares**
  - Elon Musk might **buy a majority of shares to stage a takeover**
- **A ltd is a private limited company**
- **A plc can sell shares to the general public (on stock exchange), a ltd can only sell shares to private investors (who arrange between themselves to trade shares)**
- Until the 19th Century, could only create a limited company (aka a corporation) by an act of parliament doing so or by being issued a **royal charter (e.g. Uni of Warwick)**
- **2006 Companies Act** consolidated and attempted to simplify company law
- **A cooperative is owned by a group of individuals — profits are shared between owners instead of shareholders**
- Organisations that are not public bodies but do not aim to make a profit are typically companies limited by guarantee
  - E.g. Professional body, political party, charity
  - No shares, members agree they will pay a nominal amount (typically £1 each) towards liabilities if the company fails
  - Cannot distribute profits to members
  - Can apply to be a charity
  - Can apply for a royal charter
  - BCS has a royal charter and is a charity
- In a bureaucratic organisation
  - Jobs are specialised and carried out by experts
  - Tasks are described precisely
  - Each individual is accountable to exactly one manager
  - Employees interact with colleagues and clients in an impersonal and formal manner
  - Recruitment is based on qualifications
  - Employees do not lose their jobs unless their work falls seriously below the expected standard
  - Promotion is based on achievement
  - Job for life
- In an organic organisation
  - Decision making is decentralised
  - Jobs are general
- **Structure by function** e.g. administration, operation, sales and marketing, R&D
- **Structure by location**
- **Structure by product line**
- **Structure by market sector**

- Structure by technology

## Lecture 9 – Contracts, HR, and Health and Safety

- A contract is a legal agreement between two or more parties who must
  - Be competent
  - Intend to form a contract
  - Involve a fair **exchange of consideration** (things of value e.g. money in exchange for goods or services (or not doing something))
- Contracts are based in common law
- Unfair Contract Terms Act 1977
- Human Rights Act 1998
- Equality Acts 2006 and 2010
- Direct or indirect discrimination on the basis of a protected characteristic is **illegal** unless it is "a proportionate means of achieving a legitimate aim"
  - Sex, race, religion, sexual orientation, marital/partnership status, pregnancy/maternity, age, disability, gender reassignment
- Athena SWAN charter established 2005
- Factories Act 1961
- Health and Safety at Work Act 1974 — Robens Report
- HSE (Health and Safety Executive)
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR)
  - Reportable accidents: Death, certain injuries, over 7 day incapacitation of a worker, any accident involving a non-worker, occupational diseases, certain near misses, anything involving natural gas
- Employers duties (to employees, contractors, and the public) — "so far as is reasonably practicable"
  - Provision and maintenance of safe plant
  - Safe systems of work
  - Safe use of articles and substances
  - Safe condition of workplace
  - Provision of information, instruction, training, and supervision
- Employers duties if more than 5 employees
  - Provide employees with safety policy
  - Creation of safety committee
- Dangers of working with computers: RSI, musculoskeletal injuries, eye fatigue, EM emissions from CRTs
  - All quite unlikely to cause a major problem unless you overwork yourself

## Lecture 10 – Cybersecurity

- CIA triad
  - Confidentiality — no unauthorised disclosures
  - Integrity — no authorised changes
  - Availability — no unnecessary denial of or delay to access

- Worm = a standalone piece of malware that does not require a host program and can spread through a network
- Virus = a self-replicating piece of malicious executable code that infects programs that are already installed on the system in order to be executed
- Trojan = a standalone piece of malware that claims to be legitimate software in order to be executed