What are the issues raised by ICT? (*Should refer to ethical and moral issues as part of your answer*)

Ethical:
Means moral and considering the implications of it-moral info (what's good and bad about it)

- **Makes world global, access to knowledge information at touch of finger tip.**
- **Makes things so much easier and efficient**
- **Communication easier world wide**
- **Issues are that this power can be abused if the info is in the wrong hands e.g. Credit card stolen e.t.c**
- **Not all the info we can access is not always good for us-some dangerous and illegal**

Technology has improved considerably over recent years. Technology has literally allowed access to global information to become available at a touch of the finger tip; Culture, nature, history and so much more can be accessed by just typing in on the internet. Communication world wide has been made easier by using emails, instant messaging etc, businesses have been able to access information about their clients and technology has enabled marketing efforts to be reduced with the ability to advertise online and enabling their customers to buy and see their products and information online. So, we can see that the improved and sophisticated technology is of such a great advantage and has made life so much easier and efficient for all. However, information accessed by technology can also be abused if in the wrong hands and can be, potentially, very dangerous.

In the U.S, a big brother style system has caused a stir amongst the U.S citizens. The system uses a technique known as Data Mining and the U.S insists that it will ensure greater security to all the American people. The system is so powerful that anything that anyone does can be recorded and checked to ensure that all are good citizens and are law abiding. The U.S government uses Total Awareness Systems which aim to use some of the techniques above in order to track down foreign terrorists. Information such as gun purchases, credit card transactions and airline reservations will be recorded and even trivial information such as school records, emails and instant messaging services. How much the system can and will record is still being debated and will be agreed upon over the coming years. But the basic idea of collecting and analysing important information is being used currently in many forms and using many different techniques.

Data mining is used by different organizations around the world. Police and defence departments cross check information to catch criminals and businesses also use techniques to identify potential clients. Data mining allows companies to be more targeted with the types of services and products they provide for their customer base. This gives them a lot more information about the buying patterns and habits of their clients. For example, by using the information from checkouts, supermarkets can organize how to lay out their shelves with products and how much of a certain product they might need. And telephone companies can target their email campaigns to the right demographics.

Many say that SPAM will be reduced with more data mining as it narrows down marketing efforts by knowing just who would be interested in the products being advertised for example, but it also highlights the fact that those in power can get our details without our permission and our knowledge.

Many different organizations are making good use of data mining, even areas of science, but there can be great disadvantages too.

The issue is not the collection of the information, but the purpose for which it's collected. It's completely understandable how some individuals and organisations may want certain information about others, but there are good reasons for their to be a limit and some control over how much personal information is available and how much of such information should be in the control of the individual concerned. It comes down to basic human rights and an individuals right to privacy. There is also the fact that the more people know about us, the more it can be used against us and, as we know, what is known about us is growing all the time. For example, any business can find out when an individual has visited their website by using cookies. This information can be tracked over time and can be used to build up a profile of the individual without that persons knowledge.

Mobile phones allow phone companies and services to track you down and know where you are as you move between the receiving towers. Mobile phone companies have been used by governments for the tracking of potential criminals and terrorists. Also, phone conversations can be monitored and are routinely recorded in some countries, where human rights are given less prominence.

Internet service providers know what their customers are doing on the net constantly. If the government or one of the security services ask to know what an individual is up to, the internet service providers are often obliged to divulge such information, meaning that they can determine exactly what that individual is op to.

In larger cities, one can be tracked down in ones car by the use of certain systems used as video cameras. One can be tracked down whilst on foot too, with the help of surveillance cameras. For example, in London, which is the most "surveyed" city in the world, it is reckoned that you can't travel more than a street or so without being filmed.

So, technology does help surveillance, but the question is whether the information found by using technology will be abused. For instance, if an authority wanted to employ certain people to work together to help find out information about an individual, there would be so much vital, private information that one could find out about the person, that if this were to fall into the hands, i.e. the hands of someone who would want to abuse the information, they could reek all sorts of havoc on that individuals life.

Whether Total Information Awareness System will become reality is yet to be seen, but Data mining and gathering will continue to increase and the way that society uses that data will have to be carefully monitored and considered.

Power is not always in the hands of large organizations and privacy on the internet is not always a certain person trying to protect and defend their rights against government and big businesses and organizations.

Many fear that big organizations will invade every detail of our lives, but in reality there are many smaller organizations and individuals who are of an even bigger threat and who could also misuse information. For example an individual could take photos of children and post them on the internet which would then be available for paedophiles. A person could make up details about an individual they know and post them on an accessible site. Or a SCAM artist could make people give there bank details because they are lead to believe that it is for an important issue, when actually his/her details are about to go into the hands of a fake professional, and someone who would now how to use the bank details for their own purposes.

Maintaining the right power in relationships has always been one of the big ethical challenges in society. Giving more privacy to individuals gives them more power. For example, new technology allows the receiver of the phone call to know the number of an incoming call, this is potentially a threat to the caller because companies may use the number to make unsolicited calls at a later date. By blocking the callers ID gives more power to the caller by protecting their privacy. For instance, a scam artist who convinces a person to give out their bank details can only make the trick work by hiding his ID.

Secrecy is basically behind the deceptive acts, secrecy gives more power to those undertaking criminal activity. Even with businesses behaving lawfully, power is increased from the secrets that can be kept hidden.

The freedom of information act is a law which reduces the privacy of those in power, reducing their abilities to keep secret important information. When things are out in the open there is a lot more strain on those who have to keep secrets and it is a lot harder for them to do so and if they still manage to do, they can get into trouble. This means that those in powerful positions, such as those in government, can be kept in check. In a similar way, the individuals can be brought to justice. As an analogy, if the school bully has been found out, he no longer has the same power!

Data security is all about control. There are those that are trying to make things more secure, and then there are those which are trying to break into the security.

Identity theft is when someone steels some one else's identity by steeling, for example, their driving licence, passport or ID card. By using the person's name that has had their identity stolen, they could create a new bank account in this name, transferring the money from the person's account into the new account. They could borrow money under the persons name. The person who has had their identity stolen might not be able to do anything about it until it is too late!
Shopkeepers can also steel someone's identity by illegally skimming credit cards and knowing their signature. This means they can access someone's account! Smartcards were then invented in America which don't have a magnetic strip, but have a computer chip instead making it harder to copy.

When sending private information online from one place to another, it goes through a process known as encryption. This is when the receiver uses decryption to unscramble details.
So basically security equals control. Musicians know that record companies with too much control restrict the sharing of new music. So some new internet sites allow musicians to download music free and it allows people to view the music free. The musicians then have more control over their music and have more of an acknowledgement for their music. But some think that these sites are bad for the music industry as they will cause harm in the long run. They believe that "anything that devalues the integrity of copyright is a bad thing because creators of that property ought to be compensated. If we chip away at the value of copyright, eventually it is chipping away at the creativity that pushes the culture forward."

Photographers are happy about publishing their photos on sites for all to see as long as they are then not copyrighted and they get the acknowledgement, so a system called watermarking was invented which places a permanent mark on the photo unless they have paid for it to be removed. Some computer software producers try to use passwords and built in functions to limit use.

This all shows us that some want control, with no one sharing music, photos or any product and some want freedom where all is published, all can acknowledge the new inventions and products and where everything can be shared.

An operating system known as Linux was developed as a competing system to Microsoft's system. It is what's known as an open access code system, where anybody can see and improve on how it works. As a result it is said to be one of the most successful operating systems in the world.

So, as the battle of distributing music continues, IT developers must remember that they have a very delicate and vital role to play as the tension continues between those who want freedom and those who want control.

On the internet there are people who exaggerate or who don't tell the truth. In circumstances where the reader or listener does not know much on the subject they can get away with it. Some times, due to marketing or advertising, companies and people can lie as their target audience is ignorant on a particular subject. It all comes down to common sense and the conflict of interest. But the freedom of information law helps people to know the truth.

Where information is inaccurate, one has to judge on whether it is either deception or a mistake. But in some circumstances, information has to be up to nearly one-hundred percent accurate or else it is catastrophic. In cases like this, safety critical software is used in IT. But mistakes can still happen and it's either down to the responsibility of the manufacturer, software or the organization using technology.
It's all down to accuracy being the highest priority and in this case it is the speed of the information against trusting the information and one has to find a healthy balance between scepticism and trust.

But the use of IT has become more and more sophisticated, complex and dangerous. For instance pharmacogenics is where one uses genetic information to inform us about which drugs will best suit us. In theory we could have individual tailor made drugs based on genes. This would not be possible without the recent advances in IT and the resulting significant increases in computing power.

Genomics is the science of mapping and sequencing and analyzing genes which are the building blocks of life. Managing and controlling genetic information will have a huge impact on society. It is the fastest growing knowledge base about humanity in history. Genomics might even change what we think is ethical. So pharmacogenics could result in a total reduction of side effects, but would we be happy about this type of information being stored in the hands of others? What if this information was abused?

This leads me to my conclusion on the issues raised by IT. I believe that IT is good for society if used correctly, in a trustworthy way and if used for a generally good purpose. But IT has become so powerful and advanced, that if mishandled and abused, it could be effectively INCREDIBLY dangerous and have a massive impact on our freedoms and human rights. I believe that some are still too ignorant on the advantages and especially the disadvantages of IT, so that is why I have even more reason to believe that IT should be monitored much more carefully. IT is potentially very powerful and dangerous in the wrong hands, but it allows us to have a better relationship and come to a better understanding with all parts of society if used correctly.