**Assignment Title:**

Final Coursework-Individual

Report Writing

**Module Name:**

[Technology and its Legal, Social and Ethical Context-S20](https://lms.softwarica.edu.np/course/view.php?id=120)

**Assessment cycle:**

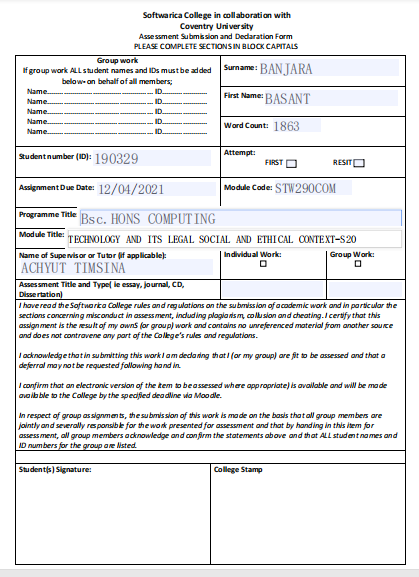
APRIL 2021

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The world has evolved drastically because of technical changes. Looking at the history world has become too much advanced in the fields of technology. Yes, there are too many benefits of advancement of technology but there are also many negative impacts of technology. Your important data may not be safe, one could get access to your all information hiding away online known as data breaching. One can hack to your bank account and could take away all the money from your account. One can use your personal information for their advantage's also can use your personal social media account. Below, we are going to describe about the modern technology digital assistant which is continuously gaining popularity for easing user in daily activities and in workplace. If its ethical implications would be properly stated then this would be proved as blessing to mankind.

Digital assistant is nothing but a predictive chat bot which simulates a conversation with an individual, complete simple task, using AI (Artificial Intelligence), over the internet. It generates the accurate answers using the advanced NLU (Natural language understanding) that we type or write. The advanced assistant can perform the multitasking and can deal with the complex question in the way that it is easy to understand for user. It uses machine learning and AI that can track about your past action and learns your preferences. These helps them to recommend about your favorite action or preferences based on your history. Acting with a virtual assistant in this manner becomes a personalized experience suited to the requirements. (oracle)

The AI partner that we all dreamed of a few years ago is now a reality. In 1990, Dragon launched the first ever voice recognition products called dragon dictate. As one of the earlier examples of a digital assistant, Clippy enabled speech inputs into Microsoft's Speech Recognition Engine and could be used to help find answers to issues. But when Apple introduce the Siri in 2011, the modern era of digital assistant has been started. In the search field google also introduced these features in 2011.Talking about now, the accuracy of these device has been reached about 98% and can directly translate many languages around the world. According to the data, about 65% of the people between the age group of (25-50) uses voice assistant at least once per day. Voice Commerce Revenues are expected to amount to $40 billion (about $120 per person in the US) by 2022.

Talking about why these are getting so popular? what are the features that they have ?Digital assistant is helping us reducing the general problems we are facing during the busy time. When you are driving and need to send a text message to someone. Or you are busy with your kitchen work with dirty hands and wants to turn on the lights. You can complete these and other activities with the help of digital assistants, and you will not even have to lift a finger! In these digital ages these assistants are helping us not only in our daily activities but also in our business which are mostly used in customer contact center to receive customer call and for other purposes. Nowadays, Employee service assistants are becoming more famous. In the fields of IOT (Internet of Things) they are not only helping but digital assistant is the part of them. From turning on lights to opening door and all they are becoming incredibly famous these days in the fields of IOT. Also, the function such as password resetting, alert message, system updates can be done through these assistants. Reminding peoples about the crucial work is also the main function of the digital assistants. We know that these assistants are immensely powerful and correct as they can answer complex questions too. You can get information about the traffic jams before you start your trip. You can ask to play the songs you want and can also make a call and send messages only by giving voice commands. All the facilities of the Digital assistant are to Facilite the user doing the important or daily activities more conveniently.

The famous digital assistants are Siri, Cortana, Alexa, Google assistant which are gaining popularity these days. They have already been built in computers and smartphones. Siri is the first digital assistant built by apple in 2011.We found this assistant in Mac OS and IOS. You can activate Siri by just saying “Siri” or by pressing home button. Secondly, Cortana can be found in Windows. You just click microphone icon and start talking with Cortana. Thirdly, Alexa is the physical digital assistant designed by Amazon. Its work is same as other digital assistants. Google assistant is also the voice assistant designed by google. You can activate google assistant by just saying “Ok google”.

Digital assistants are the virtual assistant that understand the user voice and can do the set of works according to the given instruction. But we can hear that these products have also ethical issues. Being a good listener and following human orders is one thing; sharing knowledge with a virtual assistant, on the other hand, can be difficult. It's possible that this virtual assistant could trigger privacy concerns.Our messages, photographs, and many other pieces of important personal details, including our location, can be recorded by digital assistants.They learn from our data and use it to better themselves over time.Their program is created and updated by businesses who are still looking for new opportunities to capture and use our data.A German man gained access to 1,700 Alexa audio files that belonged to a total stranger by mistake. The files showed the person's identity, activities, occupation, and other personal details. The fact that these personal assistants are recording your conversations is a major source of concern. Not only when the voice is enabled but also when we are not using these devices or phones. Companies such as Apple have claimed that the data, they obtain from these assistants is categorized as big data, and that they sell the data to governments. This is not a small thing in these ages of data, where data is king. These data could be used by one nation against another may cause war and conflicts and can also be used against you too.

As digital assistant is assisting us in various day to work to business work and making our day-to-day life too much easier. Also, Google stated in its privacy policy that they could use your data and can share to other companies without informing to the person. So that those digital assistants may kept us in danger about our privacy.Let's go back to our imaginary personal virtual assistant. To function as a smart host, it had to process various sources of knowledge about the guest. Did the digital assistant use all of the information to feed the algorithms or to intrude on the privacy of the guest? The response should vary depending on who you question. According to research, it is predicted that about 25 percentages of total people will use digital assistant by 2021.Due to the VA (Virtual Assistant) revolution in the advanced industries and other workplaces, it was thought that human abilities, particularly those related to cognitive tasks, could not be replicated by technology.it is important to have personal assistant who are appointed to take care of an important actions, especially for busy person. But virtual assistant can replace them with more efficiency. when AI automates the routine and other task people prefer Digital assistant rather than human as assistant. So Digital Assistant can replace human in workplace and there will be less employment opportunities. But we can say that having a digital assistant is good also as it will be more efficient and will be fruitful to the organization.

Virtual assistant has done a lot of tasks for us and has also been used as productivity tool. Those devices are used in business area too and they may get access to our important files. So, you need to think about the security purposes before using it.Privacy is a social norm that we would all work to preserve. First and foremost, we must teach ourselves about cybersecurity and the associated risks of new technology. Proper laws related to digital assistant should be made if those digital assistant companies are using our data in wrong manner. We may have kept those devices in the common places- but their microphones are always on. If sensitive information is simply spoken aloud in this device's presence, it may be transmitted to a third party. A virtual assistant should not be positioned in a location in your office where sensitive information is spoken aloud. Furthermore, you do not want to put your company's network at risk, so setting up a separate wireless network for these devices makes more sense. In business, data privacy and ownership are a great deal. How can you protect your data is everything is accessible by your own assistant? So, it is very much important in this time to keep your data safe checking your accounts regularly and to maintain proper security in organizational fields.

As that virtual assistant is hearing us every time and sending our data to its cloud or companies. It has been clearly stated that our data could be shared with other companies in their privacy policy which was too difficult to read. According to art. 13 in GDPR (General Data Protection Regulation) it has been stated that companies should state the purpose and scope to the user before chat. In the case of Nepal rapid development of technology enables to use personal data. Even though Nepal has seen huge and accelerated enactment of laws and regulations and the judicial did not pay that much attention to data privacy and data security issues. The electronic act 2063 is not able to make a proper privacy related act and citizen are not able to feel the right to privacy.In this dynamic framework, the government's position is crucial. To fix the privacy concerns posed by personal digital assistants, we need stricter privacy regulations. Companies like Amazon, Google, and Apple are now dictating the rules. Nepal also should bring the laws related to the use of the digital assistant as people using those virtual assistants are increasing day by day. There should be the law that if any companies are using the personal data without the permission of the user the company should be punished. Proper data protection act should be implemented in the country so the citizen could feel the right to privacy.

Artificial Intelligence (AI) is a global rapid evolution that is circling the globe and causing dramatic shifts in workplaces and businesses. According to ComScore, (https://digitalmarkgroup.com/how-digital-personal-assistants-will-impact-your-marketing/)voice searches will account for 50% of all searches by 2020.By 2020, Gartner expects that 30% of all searches will be conducted without the use of a phone. That means we will be seeing a lot of improvements in how we go through our daily lives. The Internet of Things (IoT) will continue to revolutionize our society. Anything in our homes and workplaces will be connected in some way soon. Prior to the VA revolution, it was believed that human abilities, especially those related to cognitive abilities, could not be replicated by machines. However, in the VA industry, creativity is showing it to be a modern workplace reality. Hence, Virtual assistants are being more popular nowadays due to its wide scope use and its greater impact on the industrial workplace and for daily use.

In a brief, the goals of reading about technology and ethics are to protect the rights and welfare of users. The majority of individuals are unaware of how they have violated ethical standards of information technology. Rather than discussing ethics, people should become conscious of how to act ethically. While complete privacy may not be feasible due to the considerable number of people who share information online, the nearest we can come to it must be our goal. This is why many companies today need and use rules, legislation, and general data security. Digital assistant should be used in the satisfactory manner and the production companies should take care of user’s privacy. Companies should not use data of the user for their profit. Those assistants could be very powerful and helpful for humankind if it is used in good manner.

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