|  |  |  |
| --- | --- | --- |
| 5COSC003W Coursework 2 - GROUP template 2020\_21  * Use this template to structure the GROUP element of coursework 2. Ensure that the correct information is in each white box. The advice for each box is basic guidance to help you focus your answer. * YOU MUST USE THIS TEMPLATE FOR THE GROUP WORK OF COURSEWORK 2.  The current size of the boxes is not indicating how much you should write; change their size as you need.When you save the file, put your name and registration number in the file name, eg ‘5COSC003W\_cwk2\_group\_Kelly\_Garret\_12345678.doc’.  * A reminder of plagiarism: If you use bits of another’s group report in yours or if you give your report to another group to use this will be an academic offence called ‘collusion’. * In order for the tutors to be able to assess your work you must ensure the following for your software submission:   - Submit a zipped NetBeans project folder of the **COMPLETE** working project (i.e. the parts of each group member incorporated in one program, not just your part). If you have not been able to incorporate your part with that of the group, then submit only your part – it should be able to run though by itself.  -          Make sure that the submitted project will run using the software provided by the University. Contact your tutor if you have any problems with this.  -          Make sure that the project folder should contain all files necessary to run the program e.g. excel files etc.  -          Make sure that file I/O code does not use absolute file paths.  -          Make sure that the submission contains all usernames and passwords necessary to test the program.  - Each group must upload a video describing the work in a google drive | | |
| **By submitting this coursework you agree to the following:** | | |
| I confirm that I understand what plagiarism is and have read and understood the section on Assessment Offences in the Essential Information for Students. The work that I have submitted is entirely my own. Any work from other authors is duly referenced and acknowledged. | | I confirm |
| **List here the other members of your group** | Mohammad Waraich (W1728387), Marcin, Theodor, Dylan, Mihnea | |

|  |  |
| --- | --- |
| Application Front End (HCI)– group part (10 marks)(if you have not been able to incorporate your work in the group project do not fill in this section, instead fill in section 1a below) | |
| **Guidance:** Attach here a screenshot of the front end of your application, incorporating the elements from each group member.   * Sum up all the main **HCI** issues of the application you have addressed and how they were addressed within the group, in particular as the individual elements came together. Include any HCI issues still remaining. * Comment on how well all parts of the application are linked * Marking of this section will also include the defence of your work during the demonstration | |
| **Members of the group**  **that worked in this:** |  |

|  |  |
| --- | --- |
| Application Front End (SECURITY)– group part (10 marks) | |
| **Guidance:**   * Sum up all the main **security** issues of the application and how they were addressed   and any security risks still remaining   * Marking of this section will also include the defence of your work during the demonstration | |
| **Members of the group**  **that worked in this:** |  |

|  |
| --- |
| 1a. (only if you cannot fill in part 1 above)Application Front End (HCI) – individual part |
| If you have not been able to connect your part to the group application:   * Attach here a screenshot of the front end of your own implemented part. * Explain why your part has not been able to connect to the group application. * Sum up the main HCI (10 marks) of your part and how they were addressed. * Marking of this section will also include the defence of your work during the demonstration |

|  |  |
| --- | --- |
| Professional conduct: Legal (5 marks) – Group work | |
| **Which group members worked on this:** | Mohammad Waraich (w1728387) |
| **Guidance:** With the aid of a table list here the legal issues that would affect both the development and the use of your application. You need to support this work with research. The marks in this section also include marks for references (see end of document). | |
| |  |  |  | | --- | --- | --- | | **Legal Issues** | **Affect the Development** | **Affect the use of Application** | | Traffic regulations and laws vary from place to place. | The development is affected as it would mean many more variables and factors must be used. The real traffic system perhaps uses hundreds of variables; therefore, our traffic system development is a much smaller scaled development project (Ilková, V. and Ilka, A., 2017, June.).  The development will be affected because legal issues and laws must be considered, and extensive research would be needed further for it to be used in the traffic industry. | The use of the application is affected as if the options produced say to make the streets one way, it may not apply to all of the locations. This is not good as it will destroy the function of the application and this must mean many more factors must be considered for the affect to be accurate and useful.  The use of application must be considered as the options available will not always be the most suitable option in the industry and can break legal issues when providing options as we have not considered each location different laws and roads nearby. | | Data Gathering | This can affect development because there is a legislation where others can monitor citizens and their vehicles information, and it can invoke a question of consent and people may want to know what information is being monitored.  This can affect development as those people with vehicles have a right to know how the data is going to be used. | The application will be affected because if there are too many variables, then there can be a questioning of legislation issues regarding data gathering.  The application must consider that all the data that is pertained is not going to harm the user, and some people may witness and wonder why the information is being recorded, as it could cause them stress potentially (AboBakr, A. and Azer, M.A., 2017, December.). Monitoring citizens can cause a debate that the application should not store any personal information regarding their vehicles. | | Data Protection Act | This can affect the development because the system may hold valuable data which must be protected from others (Basu, S., Foster, N. and Grimmelmann, J., 2019, October.).  In addition, the data must be accurate and valid, and the data should not be sold and removed. The data should also be prominently made aware to whom can access the data and branches of data protection can cause companies huge fines. | The application can be affected as if the data and queries and etc is not being stored correctly, or the information being output by the application is inaccurate and being shared, it can cause legal issues.  The application must follow the data protection principles and the data that is collected must be used transparently, lawfully and in a fair manner. The application must make sure it does not hold and use inaccurate information on the traffic system which can affect other people’s lives and businesses. | | Intellectual Property | This will affect the development as the application must be protected in terms of intellectual creation. Intellectual property is referred to the creative work and processes that has been used within the traffic road application. | The application will be affected because as in the industry, license fees would be charged to protect the intellectual property and this means that patenting or copyright infringement can cost a lot.  The application can cause legal issues if others start to copy the information, data and application, and disputes can arise. | | Copyright | This can affect the development because we have not protected the original application with our authorship. This means that our development process and application is not protected from the ideas behind of the authorship and copyright can occur at any given moment. | The application can be affected as there is no use of a fair use clause which means that the purpose and the nature of the application is not protected. As well as this, all the dimensions within the application are not copyrighted even though they are original, meaning anyone is able to copy. The application could even be industrial designed to protect the user interface under the particular constraints (Zakharova, I. and Zakharov, A., 2018). | | |

|  |  |
| --- | --- |
| Professional conduct: Ethical (5 marks) – Group work | |
| **Which group members worked on this:** | Mohammad Waraich (w1728387) |
| **Guidance:** With the aid of a table list here the ethical issues that would affect both the development and the use of your application. You need to support this work with research. The marks in this section also include marks for references (see end of document). | |
| |  |  |  | | --- | --- | --- | | **Ethical Issues** | **Affect the Development** | **Affect the use of Application** | | Incorrect data being used, this can cause many problems and issues. | The development will be affected as the creation of a program means that the program will analyse data related to planning and development of roads in councils.  The development will be affected as different road instructions or light system will be put into place using the data gathered (Clever, S., Crago, T., Polka, A., Al-Jaroodi, J. and Mohamed, N., 2018.). | The application will be affected based of the results from the graphs and diagram. The council will be able to decide what decision to make. For example, the development of the areas roads could mean that cycle lanes are created, or perhaps a traffic light system or even a one-way street etc.  The application will be affected as the data recorded may not consider all the factors that the traffic system in real life considers. Data that is presented in traffic volume recorded on count points on UK roads may be measured completely different or there may be many more/less count points. | | BCS Code of Conduct | The development is affected by this as it is a sign of endorsement of our reliability for our application. This can cause ethical issues because the BSC Code of Conduct has many statements which state the minimum standard of practice that must be used by all of our group members when developing the application. | The application will be affected by the BSC Code of Conduct as many guidelines and standards must be met. This will give the application a professional standard and responsibility, as well as raising the standards of the application. It should increase the expectations to much higher levels and this can cause stress for our group as we need to maintain standards when enforcing the new set of rules. | | Security of data | The development phase we must consider that the personal data must be kept safe and that others do not attempt to gain access to other peoples data. During development, we must stay away from malware as others can gain access to the data otherwise. Ransomware can also be used in the program which can affect the development of the program and the encrypted data on it. | The application can be affected as the data of people driving on certain roads can be used. This can be used as if someone is living near that road and a huge data leak occurs, there can be an increase in traffic. This can even make the house prices in that area to decrease.  The application must be secure and ensuring safety. Ethics applies here as the application has to decide the priorities and decisions in terms of what decisions the council should take. | | Private data being breached | An ethical problem during the development phase is that privacy, security, and trust must be in place in our application so that no one is breached or their trust is not disturbed by diluting the level of security.  Without security in the traffic system application, it shows a complete lack of respect and it is a major violation to the ethical principles and standards. | In the application, security questions can leak private information about the users which can cause harm and distress. It is important for us to minimise anything in the application that can cause emotional harm or physical harm to others. If any harm could be caused using our application, we would make sure to address that prior to their participation.  Private information is an ethical issue if the data security explores the proper handling of the data and if consent is being used appropriately. | | Informed consent | During the application stage, informed consent is vital because users want to be aware of what can happen, and the benefits, risks etc. This can be questioned to be an ethical issue as the person who gives all the information should be made aware to what their data will be used for.  The application stage must make others aware of what is going on, for example, signing a consent form or being given a copy to understand to provide a sense of transparency and providing trust. | During the application stage, informed consent is vital because users want to be aware of what can happen, and the benefits, risks etc. This can be questioned to be an ethical issue as the person who gives all the information should be made aware to what their data will be used for.  Buyya. R makes it clear that the application stage suffers from a lack of care in regard to adequate consent standards and makes it clear that procedures are made prominent. (Buyya, R. and Srirama, S.N. eds., 2019. ). | | |

|  |
| --- |
| References (marks included in each of the main sections) |
| Sections 3 and 4 must be supported by research.List below your sources, using Harvard referencing. Make sure that your references are referred to correctly from the relevant text of your work. **If you are not clear how to reference read:**  **https://www.westminster.ac.uk/library-and-it/support-and-study-skills/guides-and-tutorials/referencing-your-work** Here’s how we’ll assess it:  * No research sources: that’s very bad for level 5 work * There is one source with all information, copied directly as if it’s your own text: that is plagiarism * There is one source with all information, referenced and discussed: that is bad research * There are a few different sources, referenced and discussed in the text: this is getting better * There are quite a few good sources from many different places, referenced and discussed in the text: this gets good marks. |
| **Section 3 references** |
| Ilková, V. and Ilka, A., 2017, June. Legal aspects of autonomous vehicles—An overview. In 2017 21st International Conference on Process Control (PC) (pp. 428-433). IEEE.  AboBakr, A. and Azer, M.A., 2017, December. IoT ethics challenges and legal issues. In 2017 12th International Conference on Computer Engineering and Systems (ICCES) (pp. 233-237). IEEE.  Zakharova, I. and Zakharov, A., 2018. Key issues of low-level parallel programming in the individual projects for graduate students. The International journal of engineering education, 34(4), pp.1250-1260.  Basu, S., Foster, N. and Grimmelmann, J., 2019, October. Property conveyances as a programming language. In Proceedings of the 2019 ACM SIGPLAN International Symposium on New Ideas, New Paradigms, and Reflections on Programming and Software (pp. 128-142). |
| **Section 4 references** |
| Clever, S., Crago, T., Polka, A., Al-Jaroodi, J. and Mohamed, N., 2018. Ethical analyses of smart city applications. Urban science, 2(4), p.96.  Silva, R. and Iqbal, R., 2018. Ethical implications of social internet of vehicles systems. IEEE Internet of Things Journal, 6(1), pp.517-531.  Buyya, R. and Srirama, S.N. eds., 2019. Fog and edge computing: principles and paradigms. John Wiley & Sons. |