**Name - Soumith Reddy Sanigaram**

**Student ID - 306040**

a) The Software Engineering Code of Ethics produced by the Institution of Electrical and Electronic Engineers Computer Society (IEEE CS) and the Association for Computing Machinery (ACM) are: -

1) **Public**: Software engineers shall act consistently with the public interest.

2) **Client and Employer**: Software engineers shall act in a manner that is in the best interests of their client and employer, consistent with the public interest.

3) **Product**: Software engineers shall ensure that their products and related modifications meet the highest professional standards possible.

4) **Judgement**: Software engineers shall maintain integrity and independence in their professional judgment.

5) **Managemen**t: Software engineering managers and leaders shall subscribe to and promote an ethical approach to the management of software development and maintenance.

6) **Profession**: Software engineers shall advance the integrity and reputation of the profession consistent with the public interest.

7) **Colleagues**: Software engineers shall be fair to and supportive of their colleagues.

ACS code of ethics are :

1. The Primacy of the Public Interest:

You will place the interests of the public above those of personal, business or sectional interests.

2. The Enhancement of Quality of Life:

You will strive to enhance the quality of life of those affected by your work.

3. Honesty:

You will be honest in your representation of skills, knowledge, services and products.

4. Competence:

You will work competently and diligently for your stakeholders.

5. Professional Development:

You will enhance your own professional development, and that of your staff.

6. Professionalism:

You will enhance the integrity of the ACS and the respect of its members for each other.

The Association for Computing Machinery (ACM) code of ethics gives a rundown of standard of ethics that identifies with the issues secured outside the scope of the world of computing and section of land additionally intensely related due to the reality of the accessibility of technology which is accessible to the individuals who are utilizing the technology. The Association for Computing Machinery (ACM) does not give significance and dependence to the detailed regulations rather it centers around contemplations that are keen on the key standards included.

On the other hand, Australian Computer Society Code of Ethics (ACS) basically gives that however the documented standards are key, the same can't be expected to be delivered consistently and levels as there are distinctive conditions included. The, Australian Computer Society Code of Ethics (ACS) comprehends that a few gauges due cover and there may be some contention emerging on account of that reason. Hence, the recognized contrast between the two is the degree of flexibility offered which is positively more in Australian Computer Society Code of Ethics (ACS) with respect to that of The Association for Computing Machinery (ACM).

**Shins Sebu Kurian (s305406)**

**Read the IEEE/ACM and ACS codes of ethics (Requires Submission).**

**a)     Comment on any differences. How do you think these compare?**

IEEE is the acronym for Institute of Electrical and Electronics Engineers which defines the standards for Electronics & communication, and what should be the constraints for designing the electronics and communication systems. IEEE is the world's largest professional society with engineers and professionals from different backgrounds with a lot of strong volunteers around the world.

IEEE members commit themselves to the highest ethical and professional conduct and agree:

To accept responsibility in making decisions consistent with the safety, health and welfare of the public.

1. Disclose promptly factors that might endanger the public or environment.
2. to be honest and realistic in stating claims or estimates based on available data;
3. to reject bribery in all its forms;
4. to improve the understanding by individuals and society of the capabilities and societal implications of conventional and emerging technologies, including intelligent systems;
5. to seek, accept, and offer honest criticism of technical work, to acknowledge and correct errors, and to credit properly the contributions of others;
6. to treat fairly all persons and to not engage in acts of discrimination based on race, religion, gender, disability, age, national origin, sexual orientation, gender identity, or gender expression;
7. to avoid injuring others, their property, reputation, or employment by false or malicious action;
8. To improve the understanding of technology, its appropriate application and potential consequences.

ACM(Association for Computing Machinery) is meant for computer science majors for advancing in computing fields such as Data Analysis and Structure, Data Mining, Algorithm Analysis and Design, Web engineering and Software Development.

ACM code of ethics includes:

1. Contribute to society and human well-being.
2. Avoid harm to others.
3. Be honest and trustworthy.
4. Be fair and take action not to discriminate.
5. Honor property rights including copyrights and patents.
6. Give proper credit for intellectual property.
7. Respect the privacy of others.
8. Honor confidentiality.

Both ACM and IEEE are designed to guide the ethical decision making process. They both maintain high level of professionalism and ensure that IT employees, their employers and the public have a clear idea of the expected standards of the profession. They are also committed to make better competitiveness between companies. They do not provide much assistance in solving ethical dilemma because both of them increase the complexity of decision making.

**References:**

<https://www.computer.org/web/education/code-of-ethics>

<https://ethics.csc.ncsu.edu/basics/codes/>

<https://www.acm.org/about-acm/acm-code-of-ethics-and-professional-conduct>

<https://www.sqa.org.uk/e-learning/ProfIssues03CD/page_04.htm>

**TATA RAKESH**

**a)**

**ACM code of ethics:**

* Contribute to society and human well-being.
* Avoid harm to others.
* Be honest and trustworthy.
* Be fair and take action not to discriminate.
* Honor property rights including copyrights and patent.
* Give proper credit for intellectual property.
* Respect the privacy of others.
* Honor confidentiality.

**ACS code of ethics:**

* The primacy in public interest
* The enhancement of the Quality of life
* Honesty
* Competence
* Professional Development
* Professionalism

**IEEE code of ethics:**

* Accept responsibilities on making decisions
* Avoid conflicts
* Reject bribery
* Improve for understanding of technology
* Improve our technical competence
* Avoid injuring others
* Honesty

From the above one’s code of ethics, IEEE/ACM also provide guidelines to the professionals how to continue the flow. These for the most part center around society, trust, maintaining a strategic distance from mischief to others, regard others security. ACS build up the people professionally, gives the significance to supremacy of open intrigue, personal satisfaction, honesty, competence.

**REFERENCES:**

* **Acm code of ethics:** <https://www.acm.org/about-acm/acm-code-of-ethics-and-professional-conduct>
* **Acs code of ethics:** <https://www.acs.org.au/content/dam/acs/acs-documents/Code-of-Ethics.pdf>
* **IEEE code of ethics:** <http://www.ieee.org/about/corporate/governance/p7-8.html>

**Y.Ajay Kumar (s305304)**

**IEEE/ACM and ACS codes of ethics.**

1. **Comment on any differences. How do you think these compare?**

IEEE stands for Institute for Electrical and Electronics Engineering. It is the largest community of technical professionals in the world. IEEE focuses on the educational and technical improvements in computer science, Information technology, electrical and electronics engineering. The code of ethics provided by IEEE are:

1. **Public:** Software engineers shall consider the interests of the public above everyone.
2. **Client and Employer**: Software engineers shall act according to the interests of the client and the employer consistent to the public.
3. **Product:** Software engineers shall develop software that has the maximum standards of the time.
4. **Judgment:** Software engineers shall maintain sincerity and be independent in their decisions.
5. **Management:** The managers and leaders shall follow an ethical approach in developing and maintaining software.
6. **Profession:** Software engineers shall thrive to improve the integrity and prominence of the profession.
7. **Colleagues:** Software engineers shall be fair and supportive to their colleagues.
8. **Self:** Software professionals shall participate in lifelong learning about their profession.

ACS stands for Australian Computer Society. It is the largest professional society for Information and Communication Technologies (ICT) sector in Australia. It primarily focuses on the advancement in Information technology. Code of Ethics provided by ACS are:

1. **Public interest:** Software engineers shall act according to the interest of the public.
2. **Enhancement of quality of life:** Software engineers shall improve the quality of life of the people those are influenced by their work.
3. **Honesty:** Software engineers shall be honest whilepresenting their skills**.**
4. **Competence:** Software engineers shall work hard for the stakeholders.
5. **Professional Development:** Software engineers shall work on their own as well as their colleagues.
6. **Professionalism:** Software engineers shall enhance the integrity and advancement of the profession.

**Comparisons:** Many of the ethics overlap between IEEE and ACS**.**

1. Both focus on working according with the public interests and human well being.
2. Both focus on Upgrading technical knowledge and competence to achieve excellence.
3. Both focus on advancements in the profession.

**Differences:**

1. IEEE focuses on developing the software with the highest standards possible but ACS focuses on improving the quality of life affected by the work of the professional.

**References:**

1. Acs.org.au. (2018). [online] Available at: https://www.acs.org.au/content/dam/acs/acs-documents/Code-of-Ethics.pdf [Accessed 14 Mar. 2018].
2. Computer.org. (2018). *Software Engineering Code of Ethics • IEEE Computer Society*. [online] Available at: https://www.computer.org/web/education/code-of-ethics [Accessed 14 Mar. 2018].

**ETHICAL ISSUE DISCUSSION**

**[Shins Kurian]**

**Intellectual rights**

1) Developers should be aware of the infringements of intellectual rights like patents and copyrights violation.

2) Developers should not copy the source/interface design from any other existing software in the market. It can only be used with the author’s consent.

3) Use of the illegal software to perform certain tasks. The used software may not follow the licensing rules. There is a chance of developer getting penalised for such activities.

**[Rakesh Tata]**

The first and basicethical issue that arise at the development of software is privacy & copy right.

Copyright and privacy issues during this project, Copyright, since we will be making heavy use of other technologies, such as android based parkinglibraries. Privacy, since this involves selection slots, payment details & user details by people and using that to discover their identity.

Copyright issues should be easy to avoid. We'll need to make sure we thoroughly check the licenses and copyright restrictions on any software libraries, technologies, frameworks, algorithms, and anything else that has been developed by someone else**.**

**[Soumith Reddy]**

**b)**

**Not Addressing Known Bugs**

In order to meet deadlines, we may have a tendency to skimp on quality assurance testing. As a result, either quality assurance misses finding major flaws in the application, or major flaws that are discovered are not fixed because there is not enough time to re-test the fix. The problem is these flaws cause huge losses for businesses and generally inconveniences hundreds of thousands of people who uses the application.

In order to overcome this issue we need to perform

**Perfect quality assurance**

Since there are very little legal ramifications for bugs and security flaws causing system problems, Our group will easily spend little time on testing problems and addressing known bugs. However, the ethical issue is the cost of business. Businesses lose millions of dollars in lost productivity due to bugs and security flaws. A software developer and the software company can lose business and future revenues because of a ruined reputation. The best thing to do is invest time and money in quality assurance. While quality assurance is not going to catch every bug imaginable, it will catch a high percentage of the bugs and flaws

**[Ajay Kumar]**

**b)     Your team should discuss on any ethical issues which might arise while developing your software? How would you deal with them?**

One of the ethical issues that might issue while developing the android based parking system software is storing the credit card numbers and cvv of the user. In the project the user has to enter their credit card details to pay for the parking spot. But storing credit card numbers is unethical. So we will avoid that by storing only the last four digits and the expiry dates of the card