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BSCS 2B
Assignment 1

1 & 2.) Research on the ACM Software Engineering Code of Ethics. Explain each of the principles thoroughly.

Principles

Principle 1: PRODUCT

Software engineers shall, insofar as possible, ensure that the software on which they work is useful and of acceptable quality to the public, the employer, the client, and the user; completed on time and at reasonable cost; and free of error. In particular, software engineers shall, as appropriate:

1.01. Ensure that specifications for software on which they work have been well documented, satisfy the user's requirements, and have the client's approval.

1.02. Strive to fully understand the specifications for software on which they work.

1.03. Ensure that they are qualified, by an appropriate combination of education and experience, for any project on which they work or propose to work.

1.04. Ensure proper and achievable goals and objectives for any project on which they work or propose.

1.05. Ensure an appropriate methodology for any project on which they work or propose to work.

1.06. Ensure good management for any project on which they work, including effective procedures for promotion of quality and reduction of risk.

1.07. Ensure realistic estimates of cost, scheduling, personnel, and outcome on any project on which they work or propose to work and provide a risk assessment of these estimates.

1.08. Ensure adequate documentation on any project on which they work, including a log of problems discovered and solutions adopted.

1.09. Ensure adequate testing, debugging, and review of software and related documents on which they work.

1.10. Work to develop software and related documents that respect the privacy of those who will be subjected to that software.

1.11. Be careful to use only accurate data derived from legal sources and use only in ways properly authorized.

1.12. Whenever appropriate, delete outdated or flawed data.

1.13. Work to identify, define, and address ethical, economic, cultural, legal, and environmental issues related to any work project.

1.14. Promote maximum quality and minimum cost to the employer, the client, the user, and the public. Make any tradeoffs clear to all parties concerned.

1.15. Work to follow industry standards that are most appropriate for the task at hand, departing from these only when technically justified.

Principle 2: PUBLIC
Software engineers shall, in their professional role, act only in ways consistent with the public safety, health, and welfare. In particular, software engineers shall:

2.01. Disclose to appropriate persons or authorities any actual or potential danger to the user, a third party, or the environment, that they reasonably believe to be associated with the software or related documents for which they are responsible, or merely know about.

2.02. Approve software only if they have a well-founded belief that it is safe, meets specifications, has passed appropriate tests, and does not diminish quality of life or harm the environment.

2.03. Affix their signature only to documents prepared under their supervision or within their areas of competence and with which they are in agreement.

2.04. Cooperate in efforts to address matters of grave public concern caused by software or related documents.

2.05. Endeavor to produce software that respects diversity. Issues of language, different abilities, physical access, mental access, economic advantage, and allocation of resources should all be considered.

2.06. Be fair and truthful in all statements, particularly public ones, concerning software or related documents.

2.07. Not put self-interest, the interest of an employer, the interest of a client, or the interest of the user ahead of the public's interest.

2.08. Donate professional skills to good causes when opportunities arise and contribute to public education with respect to the discipline.

2.09. Accept full responsibility for their own work.

Principle 3: JUDGMENT
Software engineers shall, insofar as possible and consistent with Principle 2, protect both the independence of their professional judgment and their reputation for such judgment. In particular, software engineers shall, as appropriate:

3.01. Maintain professional objectivity with respect to any software or related documents they are asked to evaluate.

3.02. Affix their signature only to documents prepared under their supervision and within their areas of competence.

3.03. Reject bribery.

3.04. Accept no payback, kickback, or other payment from a third party to a contract, except with the knowledge and consent of all parties to the contract.

3.05. Accept payment from only one party for any particular project, or for services specific to that project, except when the circumstances have been fully disclosed to parties concerned and they have given their informed consent.

3.06. Disclose to all concerned parties those conflicts of interest that cannot reasonably be avoided or escaped and aspire to resolve them.

3.07. Refuse to participate in any decision of a governmental or professional body, as a member or advisor, concerned with software, or related documents, in which they, their employer, or their client have a financial interest.

3.08. Temper all technical judgments by the need to support and maintain human values.

Principle 4: CLIENT AND EMPLOYER
Software engineers shall, consistent with the public health, safety, and welfare, always act in professional matters as faithful agents and trustees of their client or employer. In particular, software engineers shall:

4.01. Provide service only in areas of their competence.

4.02. Ensure that any document upon which they rely has been approved by someone authorized to approve it.

4.03. Use the property of a client or employer only in ways properly authorized, and with the client's or employer's knowledge and consent.

4.04. Not knowingly use illegally obtained or retained software.

4.05. Keep as confidential information gained in their professional work that is not in the public domain, where such confidentiality is not inconsistent with matters of public concern.

4.06. Identify, document, and report to the employer or the client any problems or matters of social concern in the software or related documents on which they work or of which they are aware.

4.07. Inform the client or the employer promptly if, in their opinion, a project is likely to fail, to prove too expensive, to violate intellectual property legislationin particular copyright, patent, and trademarksor otherwise be problematic.

4.08. Accept no outside work detrimental to the work they perform for their primary employer.

4.09. Represent no interest adverse to their employer's without the employer's specific consent, unless a higher ethical concern is being compromised; then in that case the employer or another appropriate authority should be informed of the engineer's ethical concern.

Principle 5: MANAGEMENT
A software engineer in a management or leadership capacity shall act fairly and shall enable and encourage those who they lead to meet their own and collective obligations, including those under this code. In particular, those software engineers in leadership roles shall as appropriate:

5.01. Ensure that employees are informed of standards before being held to them.

5.02. Assure employees know the employer's policies and procedures for protecting passwords, files, and other confidential information.

5.03. Assign work only after taking into account appropriate contributions of education and experience tempered with a desire to further that education and experience.

5.04. Provide for due process in hearing charges of violation of an employer's policy or of this code.

5.05. Develop a fair agreement concerning ownership of any processes, research, writing, or other intellectual property to which an employee has contributed.

5.06. Attract employees only by full and accurate description of the conditions of employment.

5.07. Offer only fair and just remuneration.

5.08. Not unjustly prevent a subordinate from taking a better position for which the subordinate is suitably qualified.

5.09. Not ask an employee to do anything inconsistent with this code.

Principle 6: PROFESSION
Software engineers shall, in all professional matters, advance both the integrity and reputation of their profession as is consistent with public health, safety, and welfare. In particular, software engineers shall, insofar as possible:

6.01. Associate only with reputable businesses and organizations.

6.02. Ensure that clients, employers, and supervisors know of the software engineer's commitment to this code of ethics, and their own responsibility under it.

6.03. Support those who similarly do as this code requires.

6.04. Help develop an organizational environment favorable to acting ethically.

6.05. Report anything reasonably believed to be a violation of this code to appropriate authorities.

6.06. Take responsibility for detecting, correcting, and reporting errors in software and associated documents on which they work.

6.07. Only accept remuneration appropriate to professional qualifications or experience.

6.08. Be accurate in stating the characteristics of software on which they work, avoiding not only false claims but also claims that might reasonably be supposed to be deceptive, misleading, or doubtful.

6.09. Not promote their own interest at the expense of the profession.

6.10. Obey all laws governing their work, insofar as such obedience is consistent with the public health, safety, and welfare.

6.11. Exercise professional responsibility to society by constructively serving in civic affairs.

6.12. Promote public knowledge of software engineering.

6.13. Share useful software-related knowledge, inventions, or discoveries with the profession, for example, by presenting papers at professional meetings, by publishing articles in the technical press, and by serving on the profession's standard-setting bodies.

Principle 7: COLLEAGUES
Software engineers shall treat all those with whom they work fairly and take positive steps to support these collegial activities. In particular, software engineers shall, as appropriate:

7.01. Assist colleagues in professional development.

7.02. Review the work of other software engineers, which is not in the public domain, only with their prior knowledge, provided this is consistent with public health, safety, and welfare.

7.03. Credit fully the work of others.

7.04. Review the work of others in an objective, candid, and properly documented way.

7.05. Give a fair hearing to the opinion, concern, or complaint of a colleague.

7.06. Assist colleagues in being fully aware of current standard work practices including policies and procedures for protecting passwords, files, security measures in general, and other confidential information.

7.07. Not interfere in the professional career progression of any colleague.

7.08. Not undermine another software engineer's job prospects for one's own personal gain.

7.09. In situations outside of their own areas of competence, call upon the opinions of other professionals who have competence in that area.

Principle 8: SELF
Software engineers shall, throughout their career, strive to enhance their own ability to practice their profession as it should be practiced. In particular, software engineers shall continually endeavor to:

8.01. Further their knowledge of developments in the analysis, design, development, and testing of software and related documents, together with the management of the development process.

8.02. Improve their ability to create safe, reliable, and useful quality software at reasonable cost and within a reasonable time.

8.03. Improve their ability to write accurate, informative, and literate documents in support of software on which they work.

8.04. Improve their understanding of the software and related documents on which they work and of the environment in which they will be used.

8.05. Improve their knowledge of the laws governing the software and related documents on which they work.

8.06. Improve their knowledge of this code, its interpretation, and its application to their work.

8.07. Refrain from requiring or influencing others to undertake any action which involves a breach of this code.

8.08. Consider violations of this code inconsistent with being a professional software engineer.

Ref:
http://www.itk.ilstu.edu/faculty/bllim/itk178/Software%20Engineering%20Code%20of%20Ethics,%20Version%203_0.htm

3. Give at least one real-life scenario for every principle on how you would apply this.

Product – Someday if we develop our own software, we need to ensure that our software will be utilize well by our clients or customers, it should be a user friendly so that any client or user will be able to use this product to the full extent.

Public – If I were to develop a program it should be not harmful for clients it should be helpful and convenient and has a strong security to avoid being attack easily.

Judgement – As a software Eng. We should be able to predict what will be the outcome of our program to be able to cater the best to our clients.

Client & Employer – for example me as a software Eng. I need to give my best shot to the client by offering good software, and reliable and not easily to break through by any attackers without my and client's permission.

Management – your software must be manageable and not messy so that you can easily update it or modify. This is also efficient to avoid loss of data in the long run.

Profession – be a professional matured being consistent on your work, and supporting your members as well as your clients. If you love your profession so much you must dedicate and persevere on your field.

Colleagues – soon if I were become a software engineer with my friends I treat them Equally and support their necessity and also the same goes for me they will likely give me some ideas or contribute some options to be apply in our software perfectly.

Self – If I were to become a Software Eng. I should strive and explore things and discover new discoveries to be able to apply at my program just by doing trial and error if it is good or efficient to my program. Of course to do that I need patience in myself and be a good one if I have an error occurred I should be calmly respond to it and think properly. Trust yourself like trusting to your colleagues.