A prominent example of an ethical failure in software development is Bill Sourour's recount of his experience as a developer working at an interactive marketing firm serving pharmaceutical clients. A young developer at the time, Sourour was tasked to create a quiz for a drug that targeted women. This drug was specifically aimed towards teenage girls. The quiz would deceptively recommend the client's drug regardless of whatever the user had answered. Even though this approach pleased the client, it was revealed later on that the drug had severe side effects that included depression and suicidal thoughts. This lead to some very devastating consequences for some users. Sourour does reflect on his lack of awareness and critical thinking at the time of this event, and his responsibility in the situation as a developer to try and prevent unethical practices. In this case analysis, I will demonstrate how Kantian Deontology proves how morally problematic the code was, due to it violating the categorical imperative by deceiving users, using them as a means to an end. Sourour should have refused to write the code, because his professional and moral duty called for him to hold public welfare and ethical integrity as a higher priority over client satisfaction.

The ACM Code of Ethics highlights the responsibility of computing professionals to "contribute to society and human well-being" (Principle 1.1) and to "avoid harm" (Principle 1.2). Principle 2.5 then highlights the need to honor confidentiality, which is an important factor when it comes to maintaining trust. These principles emphasize a duty to prioritize the welfare of society and to maintain the trust that is required for ethical practices. In a similar way, the IEEE Code of Ethics emphasizes the responsibility to "uphold public's safety, health, and welfare", "avoid deceptive acts", and "accept honest criticism of technical work". The NSPE Code of Ethics doubles down on prioritizing public welfare. This in turn urges engineers to "hold

paramount the safety, health, and welfare of the public", further highlighting responsibility and integrity. As a collective, these codes push transparency, accountability, and prioritizing societal well being over personal/client interests.

Now, as we take a better look at Sourour's actions in designing the pharmaceutical quiz we can see how they contradict what was outlined in the ethical codes. The quiz was developed to intentionally recommend the client's drug regardless of the user's input, except for cases of allergies and prior usage. This failed to put public welfare first, therefore violating transparency, in turn inflicting harm. A deceptive system like this is a direct contradiction to ACM principle 1.2, which mandates avoiding harm, as it misled users and vulnerable individuals to a drug with severe side effects like depression and suicidal ideation. Looking past the immediate consequences, Sourour's acceptance of the requirements also diminished societal trust in technology. As professionals that are trusted with societal welfare, developers are expected to act as safeguards against exploitation or practices that could cause harm to the public. Aligning with the client's interest without questioning any of the ethical implications is how Sourour neglected his responsibility to make sure his work not only protects society, but also serves as a benefit to them. Because of this lack of accountability at the time, we can see how the effects highlight the importance of adhering to the principles of integrity and transparency laid out by the different ethnic codes.

Looking at this case from the perspective of Kantian Deontology, we can see how Sourour's decision to continue with the project violated the categorical imperative, which is the principle to "act so that the maxim of your action can be willed as a universal law". The quiz being deceptive in design subjected users to exploitation by treating them as a means to achieve the financial goals of the client. This disregarded their autonomy and their right to truthful

information. If every developer acted this way, or went about their jobs similarly, practices like this would practically take away public trust in software systems, and the foundational integrity of this profession would be gone. Kant's categorical imperative is what should cause professionals to act with honesty and respect towards others and uphold universal principles. Disregarding his duty to act ethically, as outlined in the ACM, IEEE, and NSPE Codes' of Ethics, Sourour's actions reflect a failure to consider the societal impact of his work. It also represented a failure to fulfill his professional and moral obligations. What Sourour should have done is refuse to write the code, and try to push for transparency during the design process. This set of actions would have better aligned with the principles outlined in the different codes of ethics we previously discussed. Now, I know that refusing the project would have likely led to professional repercussions like dissatisfaction from the client along with the security of his job being up in the air, but as far as an ethical perspective it would have allowed him to fulfill his duty to protect public welfare as well as keep up integrity within his profession. It also would have lined up with Kant's ethical values, as it would have shown that Sourour's intentions were not to complete an assignment, but rather to only create or take part in designing something that is universal in terms of fairness, and trustworthy.

The work of Mary Beth Armstrong in her work, Confidentiality: A Comparison Across the Professions of Medicine, Engineering and Accounting, takes a deep dive into the ethical obligations of professionals across these fields, highlighting the importance of confidentiality and trust present in professional-client relationships. She argues that professionals have very important roles/positions that include a lot of societal trust. With this responsibility, they are required to act ethically even when they are being faced with conflicting interests.

Confidentiality isn't solely about withholding information, but rather about fostering trust and making sure that the actions involved align with the expectations that the public has on these professions. Applying this principle to Sourour's case means that his role as a developer put him in a unique position to keep the public safe against practices that are deceptive. Also stressed through Armstrong's work is how important professionalism is. Armstrong herself defined it as adherence to a higher standard of behavior and responsibility that is beyond regular competence and/or job performance.

The inherent trust in the developer-client-public relationship with Sourour was, as previously stated, violated once he created a completely deceptive quiz. Armstrong's framework reveals how this breach of trust loses credibility of the software development profession. Prioritizing the client's marketing goals over the welfare of the users does not uphold the ethical standards that are expected from professionals. The comparison Armstrong stresses among the different professions highlights the position that developers have as gatekeepers of ethical practices in technology. Just like how physicians are trusted with their patient's health and engineers are trusted with the safety of their designs, developers are trusted with the integrity of their designed systems. What Sourour did compromised this trust and demonstrated a disregard for the societal expectations of his profession. Armstrong emphasizing professionalism can show how much developers are needed to act in trustful ways and to protect public welfare, even when faced with pressure from clients or employers.

Now that we have added Armstrong's framework, we can now add on to the assessment of this case looking at it from Armstrong's perspective. Confidentiality, as described by Armstrong, is not only withholding information but also making sure that actions align with the ethical standards of a specific profession. By creating a quiz that deceived users, Sourour

violated this definition of confidentiality therefore compromising the trust placed in him as a developer. We can also focus on professionalism, and the way in which this was disregarded through Sourour's actions. With professionals being expected to adhere to higher standards and responsibilities, as suggested earlier, Sourour should have at least advocated for transparency or a quiz that was not deceptive. Doing this would have better lined up with Armstrong's definition of the word professionalism, and prevented a lot of the consequences from happening. Instead, Sourour compromised trust in prioritizing other goals over ethical standards, he risked undermining the integrity of his profession.

In conclusion, when analyzing Bill Sourour's actions, we can see how writing the code for a pharmaceutical quiz that is deceptive was morally problematic. He violated ethical principles, using the users as a means to an end, not prioritizing public welfare, and breaching the trust he was given through his professional role. Although I understand that there is a strong argument that Sourour was only fulfilling his job requirements, I still stand by, and am arguing, for the point that the moral and professional obligations of Sourour as a developer were overlooked. Each of the ethics codes and Armstrong highlight the responsibilities that developers have when it comes to client and public trust, and again, Sourour's decisions failed to keep these responsibilities.