American International University- Bangladesh (AIUB)
Faculty of Engineering (EEE)

Course Name:	Engineering Ethics and Environmental Protection	**Course Code:**	EEE 3107
Semester:	Fall 2025-26	**Submission date:**	08/02/2026
Item:	CO1: Design solution for complex ethical dilemma in accordance with professional engineering practices (P.f.2.C5)		
Student Name:	**S.M.RASEL**	**Student ID:**	**22-48039-2**
Department:	**CSE**	**Section:**	**I**

Marking Rubrics (to be filled by Faculty)

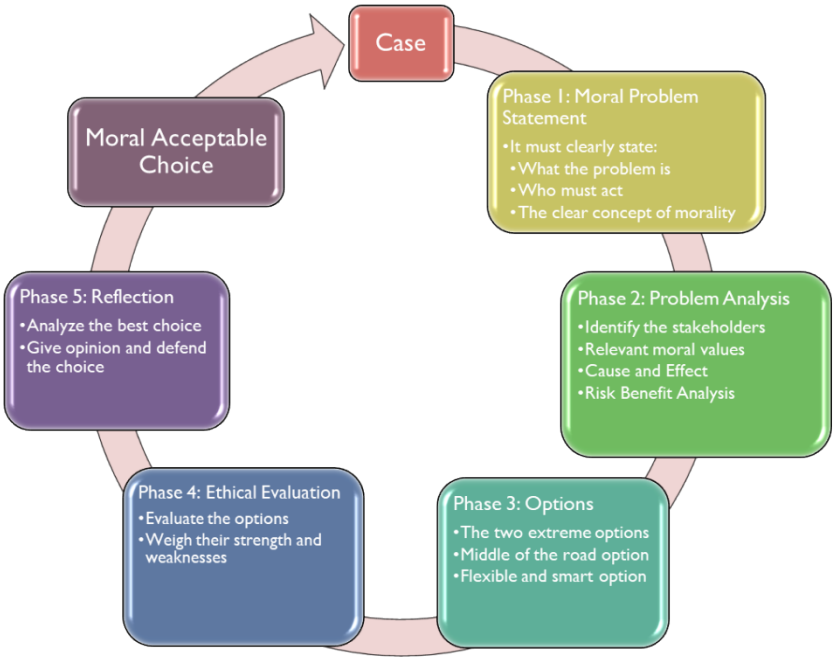
Category	Proficient [6]	Good [5]	Average [4-3]	Poor [2-1]	Secured Marks
Explanation of Ethical Dilemma	Dilemma /problem to be considered critically is stated clearly and described comprehensively, delivering relevant information necessary for full understanding.	Dilemma /problem to be considered critically is stated, described, and clarified so that understanding is not seriously impeded by omissions.	Dilemma /problem to be considered critically is stated, but description leaves some terms undefined, ambiguities unexplored, boundaries undetermined,	Dilemma /problem to be considered critically is stated without clarification or description.	
Accepted practice areas in the engineering discipline (K7)	Identifies and relates all the solutions with the accepted practice in the engineering discipline.	Identifies and relates some of the solutions with the accepted practice in the engineering discipline.	Identifies and but does not relates the solutions with the accepted practice in the engineering discipline.	Fails to identify and does not relates the solutions with the accepted practice in the engineering discipline.	
Depth of Knowledge (P1)	Specific position (perspective, hypothesis) is imaginative, considering the complexities of an issue. Limits of position (perspective, hypothesis) are acknowledged. Others□ points of view and assumptions are synthesized within position (perspective, hypothesis).	Specific position (perspective, thesis/hypothesis) considers the complexities of an issue. Others□ points of view and assumptions are acknowledged within position (perspective, hypothesis).	Specific position (perspective, hypothesis) acknowledges different sides of an issue.	Specific position (perspective, hypothesis) is stated, but is simplistic and obvious.	
Critical analysis with related outcomes including all factors (implications and consequences) (P7)	Extends a detail critical analysis with related outcomes including all factors (implications and consequences)	Extends a detail critical analysis with some related outcomes including all factors (implications and consequences)	a partial critical analysis with minimum related outcomes including all factors (implications and consequences)	a partial critical analysis with no related outcomes including all factors (implications and consequences)	
Valid Conclusions with innovative thinking (P3)	Valid conclusions and innovative thinking that reflect student□s informed evaluation and ability to provide logical and unique solution	Valid conclusions and innovative thinking that reflect student□s informed evaluation but solution is not unique.	Partially logical conclusions with some innovative thinking.	Conclusion is inconsistently tied to some of the information discussed; related outcome is not unique.	
For complete Similarity with other (Negative Marking will be imposed)					
Comments:			Total Marks (Out of 15):		

SDX Alliance is a large company that sells computers, computer components, and software. Ralph is hired as an entry-level software engineer at SDX Alliance. His first project was to assist in writing the code for SDX Alliance□s new hard disc controller. He had previously worked on a similar system interning at a start-up and had written a code which greatly enhanced the performance of their product. Ralph quietly re-uses this same code in the SDX Alliance product and does not think to tell anyone that he has used the code from his last job. His manager is thrilled with the speed improvements this code brings to the product.

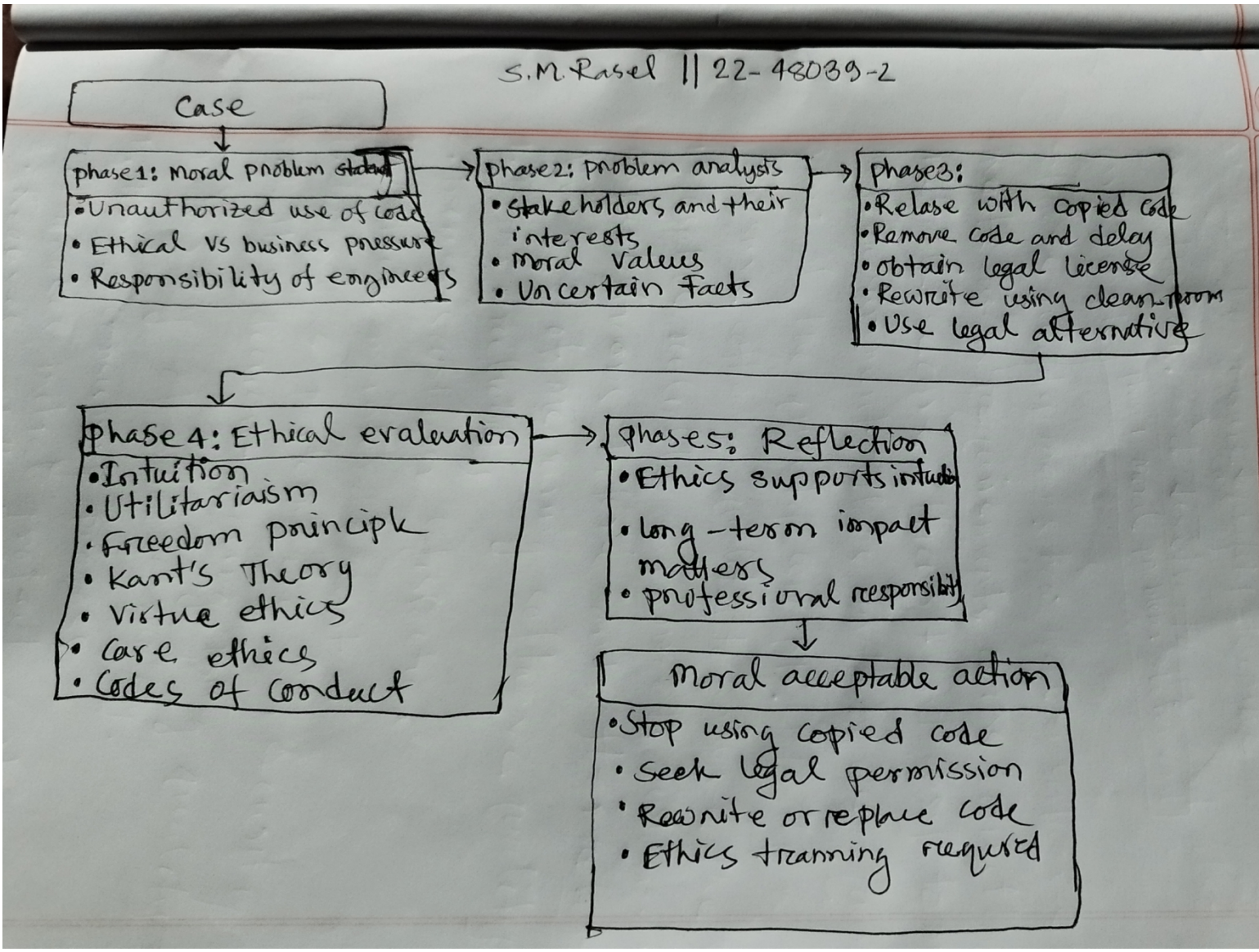
Before the product is released, it has to undergo a four-month long quality assurance process review. During the review of the product, it was found the code which Ralph developed had been copyrighted by the startup he had previously worked for. Even though Ralph had developed the code, his previous company still owned the intellectual property rights to it.

When his manager informed Ralph of the problem, Ralph admits he did not realize he had made a mistake because he was not familiar with copyright laws. Ralph then goes on to explain that the start-up he used to work for is now out of business and is unsure if SDX Alliance would be able to get in contact with the owner of the copyright. If SDX Alliance can□t use Ralph□s code, then it will have to rewrite the entire code of the product, delaying its release by many months.

Using the below five-step analysis technique of resolving Ethical / Moral Dilemma, analyze the Role of Ralph and his manager in this case from the concept of IEEE Code of Ethics (i.e. that how they should act Ethically and handle the situation with some proposed solutions and finally which solution they adopt). You have to explain clearly the five steps with the necessary description. Write about the Moral Clarity and Justification of your final choice of option to solve the case from the Perspective of the IEEE Code of Ethics.



Solution:


S.M.Rasel || 22-48039-2
Case
phase1: Moral problem stated
•Unauthorized use of code
• Ethical Vs business pressure
• Responsibility of engineers
phase2: problem analysis
• Stakeholders and their interests
• Moral Values
• Uncertain facts
phase3:
•Relase with copied code
•Remove code and delay
• obtain legal license
• Rewrite using clean-room
• Use legal alternative
phase 4: Ethical evaluation
•Intuition
• Utilitarianism
• Freedom principle
• Kant's Theory
• Virtue ethics
• Care ethics
• Codes of Conduct
phase5: Reflection
• Ethics supports intuition
• long-term impact matters
• professional responsibility
Moral acceptable action
•Stop using copied code
• seek legal permission
• Rewrite or replace code
• Ethics training required