Department of Software Engineering Mehran University of Engineering and Technology, Jamshoro			
Course: Software re-engineering (SW-415)			
Instructor	Engr. Salahuddin Saddar	**Assignment Type**	Complex Engineering Problem
Semester	7th	**Year**	Final
Submission Deadline	17th march,2023	**Assessment Score**	10

Complex Engineering Problem - Characteristics		
1	Depth of knowledge Required	☑
2	Range of Conflicting Requirements	☑
3	Depth of Analysis Required	☑
4	Infrequently Encountered Issues Involved	☐
5	Beyond codes/standards of practice	☐
6	Diverse groups of stakeholders with widely varying needs involved	☑
7	Interdependence (high level problems including many component parts/sub-problems)	☑
8	Have significant consequences in a range of contexts	☐
9	Judgement (Require judgement in decision making)	☑

Problem Description

Consider a scenario (your choice website)where B to C application is running. The application enables the users to buy the products of their choice unlimited time.
After a while when the traffic increases the response of the application becomes slow. All the customers' requests take too much time to be completed. This is the overhead to be addressed.
Being a software engineer how do you address the issue by considering the following:
1. What Re-Engineering changes you make to achieve less response time?
2. What software engineering strategies you plan to manage the huge traffic?
3. Can software refactoring (restructuring) rescue the application from poor response?
4. What different software re-engineering techniques be applied to come out of this problem?
5. How backward and forward slicing on source code could make positive impact?

Rubrics	Assessment					Marks
	Unacceptable	Poor	Acceptable	Adequate	Proficient	
R1 Identification of constraints/requirements/demands	☐	☐	☐	☐	☐	
R2 Originality/contribution	☐	☐	☐	☐	☐	
R3 Engineering knowledge (standards)	☐	☐	☐	☐	☐	
R4 Efficiency of the alternatives	☐	☐	☐	☐	☐	
R5 Evaluation of the prototype	☐	☐	☐	☐	☐	
					Total Marks	