Code Refactoring Using Slice-Based Cohesion Metrics and AOP

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Abstract : Software refactoring is very essential for maintaining the software quality. It is an usual practice that we first design the software and then go for coding. But after coding is completed, if the requirement changes slightly or our expected output is not achieved, then we change the codes. For each small code change, we cannot change the design. In course of time, due to these small changes made to the code, the software design decays. Software refactoring is used to restructure the code in order to improve the design and quality of the software. In this paper, we propose an approach for performing code refactoring. We use slice-based cohesion metrics to identify the target methods which requires refactoring. After identifying the target methods, we use program slicing to divide the target method into two parts. Finally, we have used the concepts of Aspects to adjust the code structure so that the external behaviour of the original module does not change.