Project Proposal

SE 801

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Detect and Refactoring Code Smells

Project Specification

In this project i will develop a tool which can detect five types of code smells and refactor two of those smells automatically. Code smells refer to any symptom in the source code of a program that possibly indicates a deeper problem. Code smells that the tool will detect automatically are given below:

1. God Class
2. Data Class
3. Long Method
4. Feature Envy
5. Duplicated Code

This tool will also provide auto refactoring suggestion for two code smells. Those are:
1. Long Method
2. Feature Envy

Input:
1. Source code of a java project

Output:
1. A list of identified code smells in the project.
2. Auto suggestions for refactoring of above mentioned smells.

Project Motivation:

Smells in the code are one of major problems in software development. It hinders software maintenance and evolution. Detection of code smells is challenging and time consuming for developers and their informal definition leads to the implementation of multiple detection techniques and tools. I have selected this project so that I can achieve some hands-on experience in this vital area of software engineering. By conducting this project my knowledge will be enriched in the field of code smell detection and refactoring. In this area, there exist vast amount of research opportunities. So, this project may open the door of future research opportunities for me in this area.

Project Timeline:

Stages\Dates	August		September		October	
	1-15	16-31	1-15	16-30	1-15	16-31
Requirement Analysis	■	■				
Design	■	■	■	■		
Development		■	■	■	■	
Testing		■	■	■	■	■
Documentation		■	■	■	■	■