Artificial Intelligence (CS60045)
Assignment 1 (Theory)

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I propose an AI agent that analyses a Code project and parses from it the underlying architecture of the code logic and design, the code modules dependency graph, the method/object definition, declaration and usages, etc.; tools to streamline and reduce time and effort expended in understanding and modifying an existing code project which developed and evolved over time. It has learning capabilities and gets better at its task with experience.

Agent Type	Dynamic Code Analyzer
Input	The whole folder structure containing a code project with external dependencies preferably being publicly accessible Open-Source modules.
Output	A searchable, interactive interface showing the underlying architecture of the code logic and design, the code modules dependency graph, the method/object definition, declaration and usages, etc. tools
Environment	Filesystem containing the source code and other code project files; World wide web for libraries, source codes, programming language documentation, etc.; Human-Computer Interaction system (*Classical input-output system of mouse, keyboard, Screen* **or** *more modern systems like speech, and other tactile I/O systems*).
Task	● Developing models to parse Code projects to decipher the underlying architecture of the code logic and design, the code modules dependency graph, the method/object definition, declaration and usage; and presenting this deciphered Information in an intuitive UI. ● Use publicly available documentations to refine and learn better code parsers. ● Get better at its task, the more it is used. Should have a self-evaluation method to measure its performance, and improve this performance. Also use user feedback for reinforcement learning. ● Present the information in a searchable, interactive interface to reduce development time and effort.