

Source Code Analysis System (AnalyzeME)



Company: Large Multinational Corporation

Location: Japan

Customer Description

The customer is in the software research department of a large Japanese multinational corporation, whose products and related software are being sold throughout the world, including Japan, US, The America's, Australia, Asia and Europe.

Business Need

Our customer needed to develop a tool for analyzing source codes and creating detailed metric reports. The metrics tool was needed to help analyze the quality of the source codes and measure the efforts/changes/complexity of the source code, to enable the customer to evaluate the potential risks of implementing the software products.

Solution Offered

The tool of AnalyzeMe was developed by Intechno to meet the business needs and requirements of the customer. The tool is divided into several major modules, they are as follows:

Options Parser

This module reads and parses all options from a specified option file and parameters of the program. All options are stored in a list. Each major functional option has a priority level set to it.

Source Reader

This module reads all files that should be treated as inserted source files. If the inserted source file is in the directory, then the system locates and extracts all files with the specified ext-file-name; these files are located in the specified directory and all its subdirectories according to the option specifications.

Pre-processing

After the source codes are loaded and before being analyzed, the source codes should be pre-processed, including: deletion of spaces before each line, combining multi-line-statements into one line.

General Metrics

This module provides a variety of metrics, including, LOC (Line of Code), Redundancy, Function Number, ELOC (Executable Line of Code, Complexity and Similarity.

Report Generator

When running the metrics according to the user specified options, reports can be generated. The reports are exported and saved as *.csv files.

Message & Error Handling

This module handles various kinds of message processes. Including,

- Generating an error message for source code analysis;
- Exporting the exception information of the system;
- Exporting the processing status message according to specified options derived from the program's parameters

Technology Used

- Windows2000/XP, Solaris
- Visual C++ 6.0, gcc,
- Rational Rose, Clear Quest, CVS

Benefits to Customer

- Using our superior business knowledge, large resource base and incorporating industry renowned methodologies such as "Waterfall", we developed a powerful, easy-to-use and reliable source code analysis tool, which exceeded the customers' expectations.
- The innovative solution we deployed greatly increased the efficiency of the customer's code analysis, lowered the risk of incorporating "bad" code into their systems and provided an intuitive environment for the customer to interface with.

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