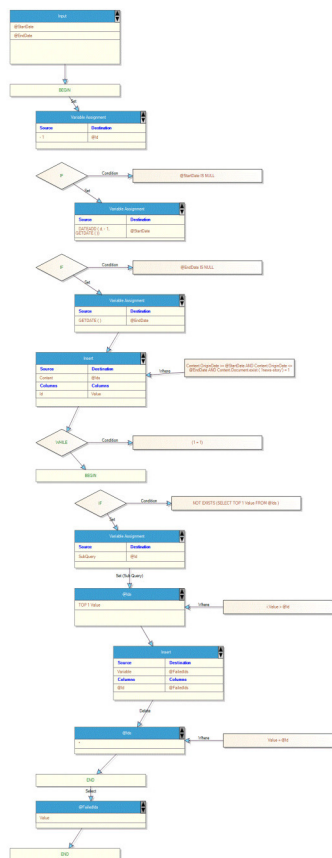# The GenesisOne T-SQL Source Code Unscrambler™

GenesisOne's T-SQL Source Code Unscrambler™ is the industry's first tool which reads your SQL code and automatically creates professional, data-flow documentation without altering your code in any way. This is possible because of a patent-pending algorithm that understands any code base and organizes it so both developers and non-developers can understand the logic. This breakthrough, proprietary tool provides very substantial savings in both time and cost. It can also put management's mind at ease by enabling them to see for themselves that the code is written the way it should be without having to peruse thousands of lines of code. The documentation can be written to HTML, Word or PDF and can serve as a formal artifact and reference guide. With the ability to follow data flow in detail, the Unscrambler is a MUST for Big Data.

The world-renowned Fraunhofer Center for Experimental Software Engineering performed independent, black-box testing of the Unscrambler against a full scale test suite and can attest to a 100% pass rate against that test suite.

Problem

The lack of well-documented source code in software applications is a major problem in software maintenance. A major part of this relates to those developers who need to fix or modify a piece of code with which they have no familiarity. Stored procedures account for the vast majority of database code and are part of almost every application, yet they are poorly documented. To counter this lack of documentation, organizations create global coding standards, code comments and formatting styles, all of which are vital yet challenge tight delivery schedules. As a result, most documentation is incomplete or missed altogether and as changes are introduced, what is there quickly becomes out-of-date.

Our Solution

Source code visualization is one of the most effective means of understanding the logic of code without having to read through thousands of lines of SQL. By summarizing the enormous amount of code detail into an accurate, easy-to-understand graphical representation, our Unscrambler provides very significant efficiency gains that are realized across the entire organization.

Where Do Our Efficiencies Come In?

Change Management

With our tool, a developer can understand the code and how it flows, and changes to the code become much simpler to make and introduce less risk when making modifications. The substantial time savings are derived not just from making the change itself, but from the reduction or elimination of time spent on bug fixes that typically result from these changes. This eases the burden of understanding and maintaining existing legacy systems.

Coding Standards

Because code needs to be modified and maintained, a vast majority of organizations create and enforce coding standards to make code easier to read and understand. In the effort to stay on schedule, however, these tasks typically get pushed far down in priority and often don't get addressed. With the graphical representation of code generated from our T-SQL Source Code Unscrambler™, all code, regardless of who wrote it, when it was written or how it was formatted, is displayed 100% of the time in a straightforward, easy to understand flow diagram.

Code Reviews

Developers and managers both know how challenging it can be to organize and coordinate code reviews. They are, by definition, very detailed and require time to go through the code line by line. On large projects, this can prove overwhelming. When the reviews can be focused on the logic within the programming with our tool, rather than on formatting and coding standards, code reviews take much less time and don't require everyone reading through mountains of code. Our automated graphical representation can become its own coding standard within an organization, allowing the project to stay on schedule while enabling the completion of these important tasks.

Less Pressure on Developers

With fewer demands being placed on developers and the ability to focus primarily on coding, developers will be under less pressure and morale will only improve as a result.

Legacy Code

Many organizations are currently supporting systems that were built by developers who have either moved on or, even if they're still there, may not remember anything about the code that was written. This means that making changes or corrections involves studying thousands of lines of code for logic and dependencies. The T-SQL Source Code Unscrambler™ can drastically cut the time it takes to understand any T-SQL code, regardless of who wrote it or when it was written.

Project Management

With the responsibility of keeping development on track, on time and within budget, all levels of project management look for regular feedback on progress. Even when they get the answers they need from those developing the software, they still have no assurance that the information they're getting is accurate. They understand the requirements, yet typically aren't experts with code. The T-SQL Source Code Unscrambler™ bridges that gap and gives them the ability to align the code with the business logic, giving them the assurance they need.

Who Benefits from Our Unscrambler?

Project Managers can track coding progress and verify functionality without having to read the code.
Development Managers can perform analysis of the code as it is being developed.
Operational Personnel can know what's on their servers and generate formal reference documentation.
Consultants can provide high quality documentation for their clients.
Developers new to a project can get up to speed quickly and understand all code relationships.