Structural Analysis of Creativity in Programs:

Each statistic is a count of the number of times the structure occurs within a piece of code. As designed, the statistics are not language-specific and should be calculable for all programming languages. The calculation of each variable should be fairly easy (indeed, probably can be programmed) as it involves counting occurrences.

The statistics are in two groups. The first looks at how program control is implemented; the second evaluates how variables are defined. Once the two numbers are created for a set of programming examples, it should be possible to compare the number sets looking for the variance that exists within the sets. This can be done overall on the full 14 digit numbers, but can also be done on each individual statistic.

Program Control: A number of 14 digits comprised of the following parts:

Statistic (2 digits each)	**Description**
Subroutines	A count of the number of internal subroutines written by the programmer.
For Loops	A count of the number of “for” loops (using automated counters)
While Loops	A count of the number of “while” loops (using automated comparison)
If	A count of the number of simple “if” statements
Else	A count of the number of “else” statements
Case	A count of the number of “case” or “switch” statements
Go To	A count of the number of “go to” statements

Variables: Also 14 digits comprised of:

Statistic (2 digits each)	**Description**
Number of variables	A count of the number of unique variables contained in the code
Number of integers	A count of the number of unique integer variables contained in the code
Number of floating	A count of the number of unique floating point variables contained in the code
Number of character strings	A count of the number of unique character variables contained in the code
Number of arrays	A count of the number of unique arrays of variables contained in the code
Average length of variable names	The mean length of a variable name in the code
Comments	A code indicating how comments are used: 00 No comments present 01 Some comments are used 02 Comments are extensively used