!**************************************					
' IDEAScript :	Last-Two Digits Test.iss				
'Author :	Brian Element - brian.element@ideascripting.com				
' Date :	October 10, 2011				
' Purpose :	To identify number invention within the database. This test looks at the				
1	last two digits of a number and compares their frequency with Benford's law.				
1	The LTDT Test is based on Chapter 8 of Nigrini, Mark J., Forensic Analytics:				
	Methods and Techniques for Forensic Accounting Investigations,				
1	New Jersey: John Wiley & Sons, Inc., 2011: Print				
'Modified:	Jan 13, 2012 - Help added to the script				
'Modified:	Mar 10, 2012 - Added history and updated some of the script				
1	Mar 10, 2012 - Updated the script so the stats are calculated automatically				
!**************************************					

This test is based on the expected frequency of the last two digits of a number. Per Benford's law, the Last-Two Digits Test (LTDT) should appear evenly. This test is useful in looking for "made-up" numbers.

💷 Last-Two Digits Te	st		•				
Select File	No file selected						
Select the amount field to run the test							
ОК	Cancel	▼ Help					

To use this script run the Last-Two Digits Test.iss. You will have the following menu:

You first must select the file you wish to perform the analysis on. Once the file is select you can choose the amount field to run the analysis.

🖳 Last-Two Digits Test 🛛 💽					
Select File File: data-Sheet1.IMD					
Select the amount field to run the test					
	•				
VENDORNUM					
AMOUNT					
AMOUNTI	Неір				
TEMP					
LASTIWO					

The output will create a graph comparing the expected with the actual.



The database that is created will show the last two digits that were looked at, for items 0 to 9 the leading 0 has been dropped so item 0 is actually 00, item 1 is 01 and so on. The database shows the number of times (NUMBER_OF_RECS) that that number has appeard as the last two digits, the actual is the percentage of times, so for 00 it apeared 22.9% of the time. The next column shows us what Benford expects it to be which is 1% and the last two columns are the difference and the absolute difference between the actual and expected percentage.

LAST_TWO_DIGITS	NO_OF_RECS	ACTUAL	BENFORDS_LAW	DIFFERENCE	ABS_DIFF
0	<u>40673</u>	0.229	0.010	0.219	0.219
1	<u>982</u>	0.006	0.010	-0.004	0.004
2	<u>1016</u>	0.006	0.010	-0.004	0.004
3	<u>937</u>	0.005	0.010	-0.005	0.005
4	<u>1014</u>	0.006	0.010	-0.004	0.004
5	<u>1355</u>	0.008	0.010	-0.002	0.002
6	<u>935</u>	0.005	0.010	-0.005	0.005
7	<u>1036</u>	0.006	0.010	-0.004	0.004
8	<u>1135</u>	0.006	0.010	-0.004	0.004
9	<u>910</u>	0.005	0.010	-0.005	0.005
10	<u>1593</u>	0.009	0.010	-0.001	0.001
11	<u>935</u>	0.005	0.010	-0.005	0.005
12	<u>1065</u>	0.006	0.010	-0.004	0.004
13	<u>988</u>	0.006	0.010	-0.004	0.004
14	<u>899</u>	0.005	0.010	-0.005	0.005
15	<u>1396</u>	0.008	0.010	-0.002	0.002
16	<u>1210</u>	0.007	0.010	-0.003	0.003