Multimedia project

Made By:

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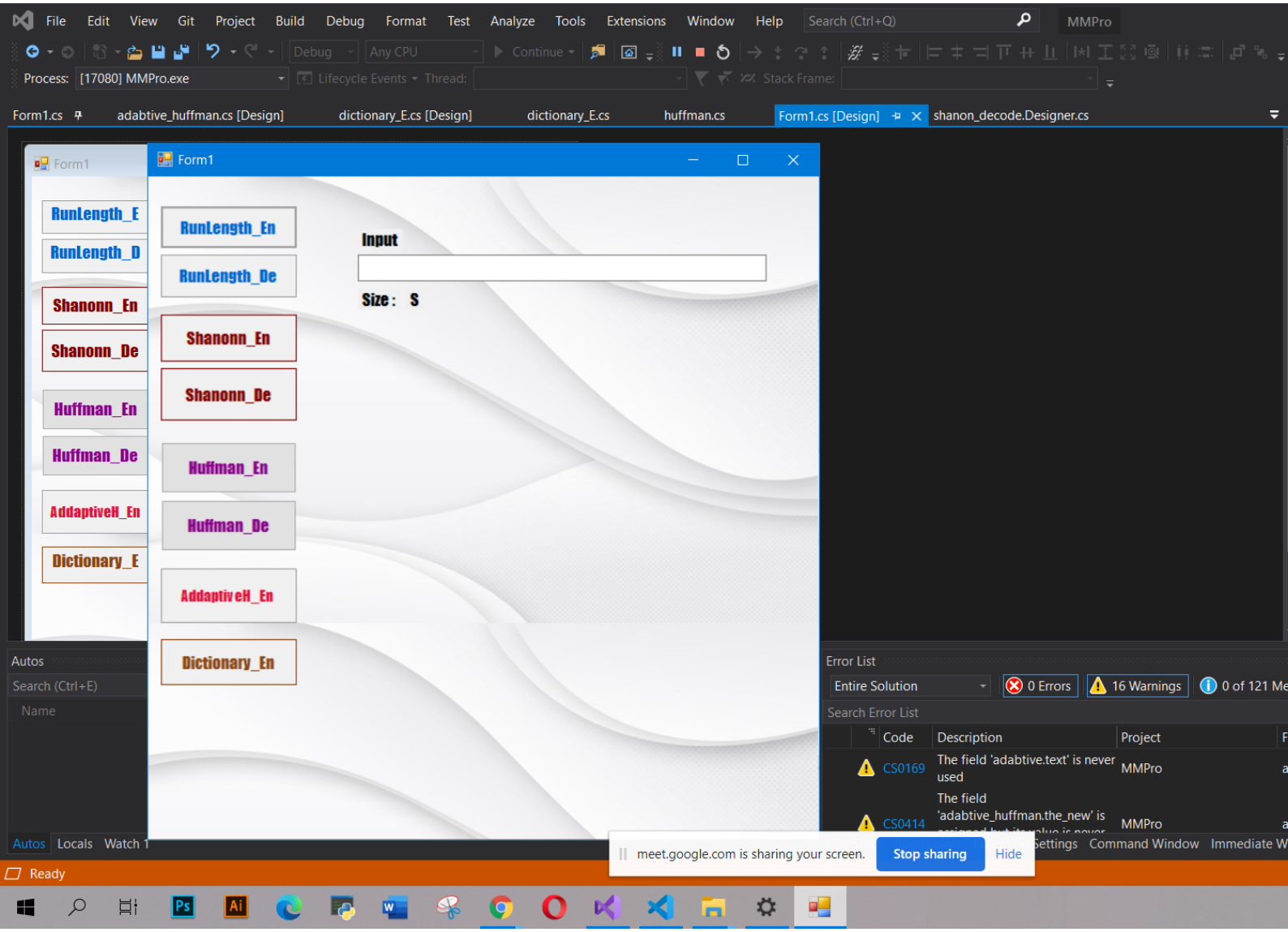
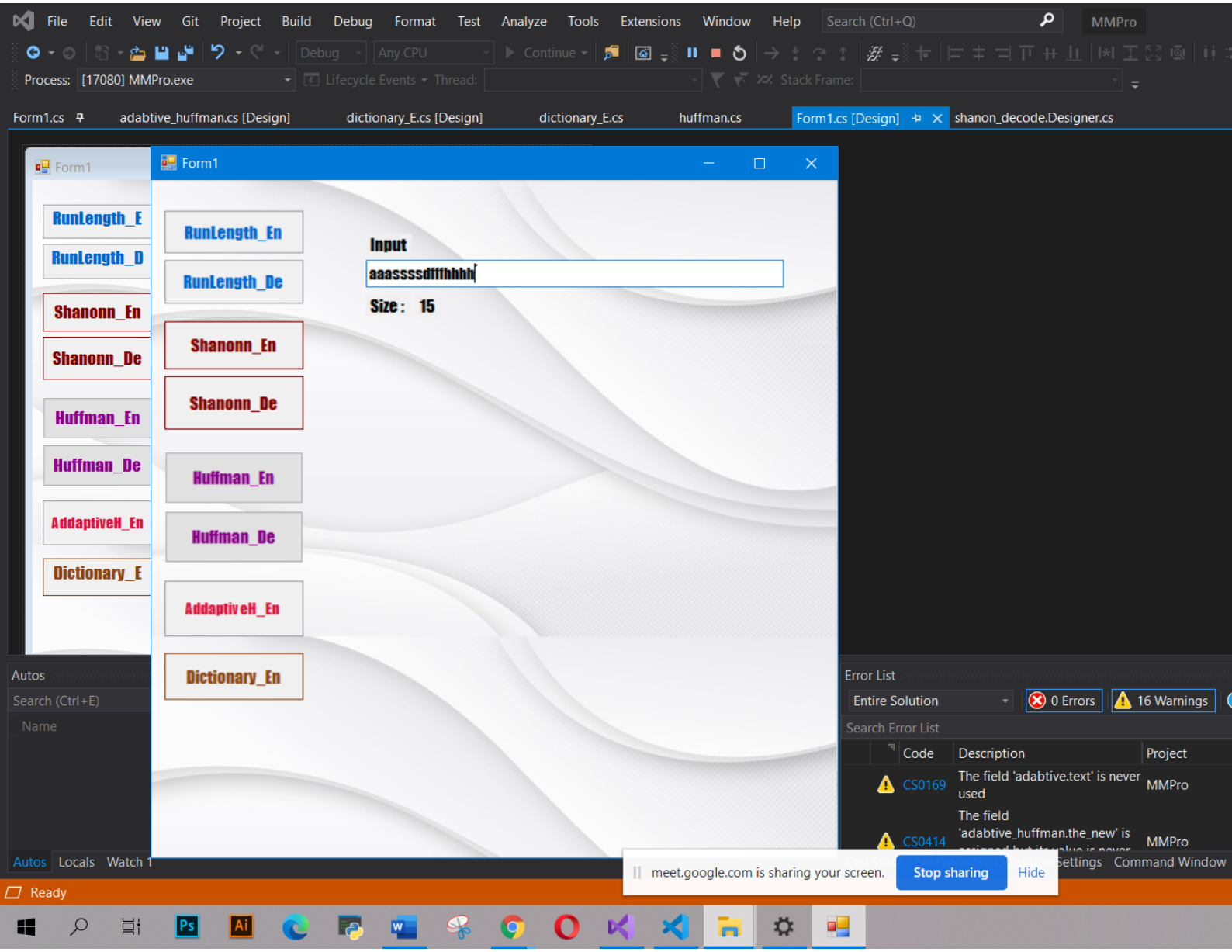
- This the main windows form

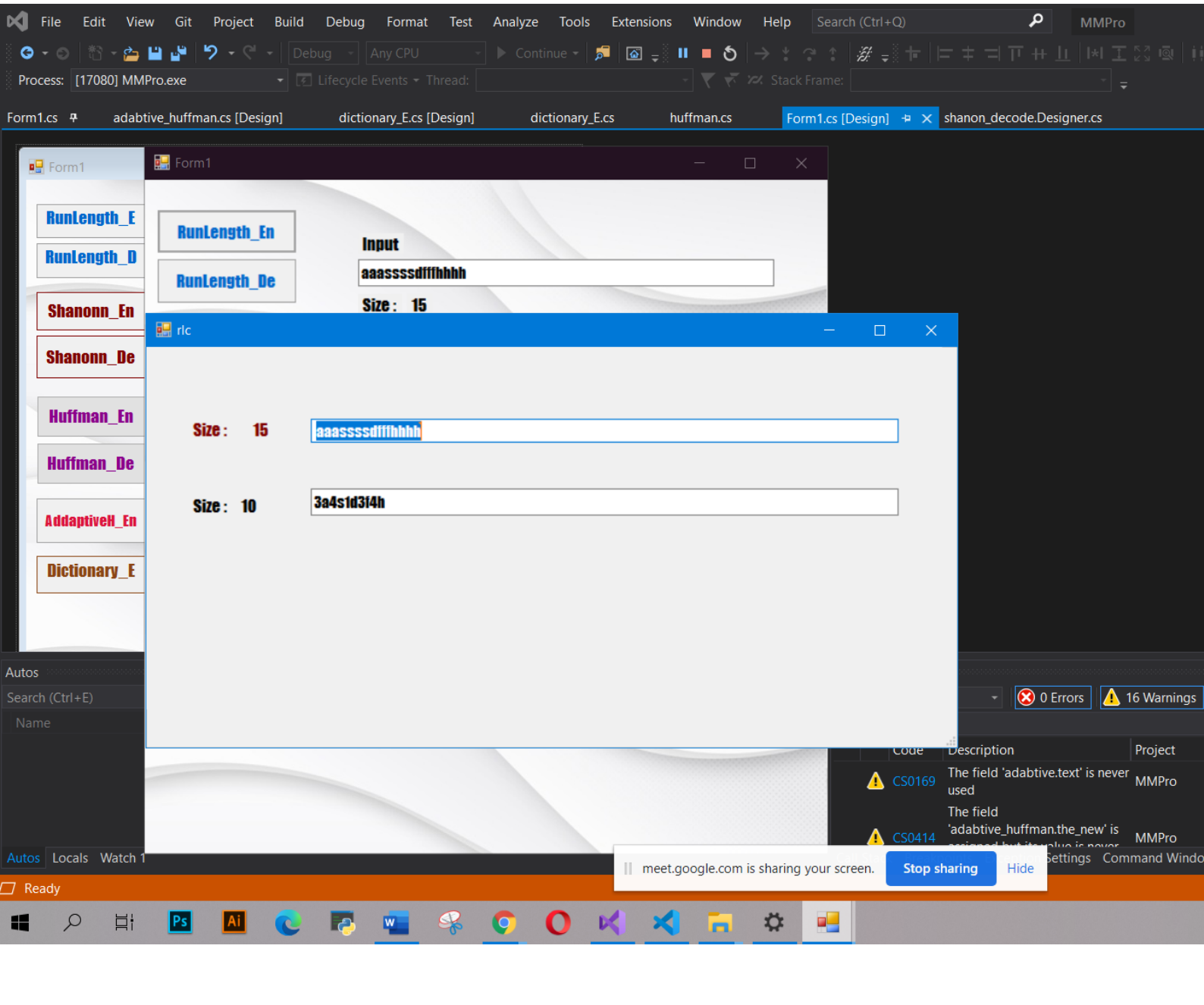


- Starts to put string inputs here



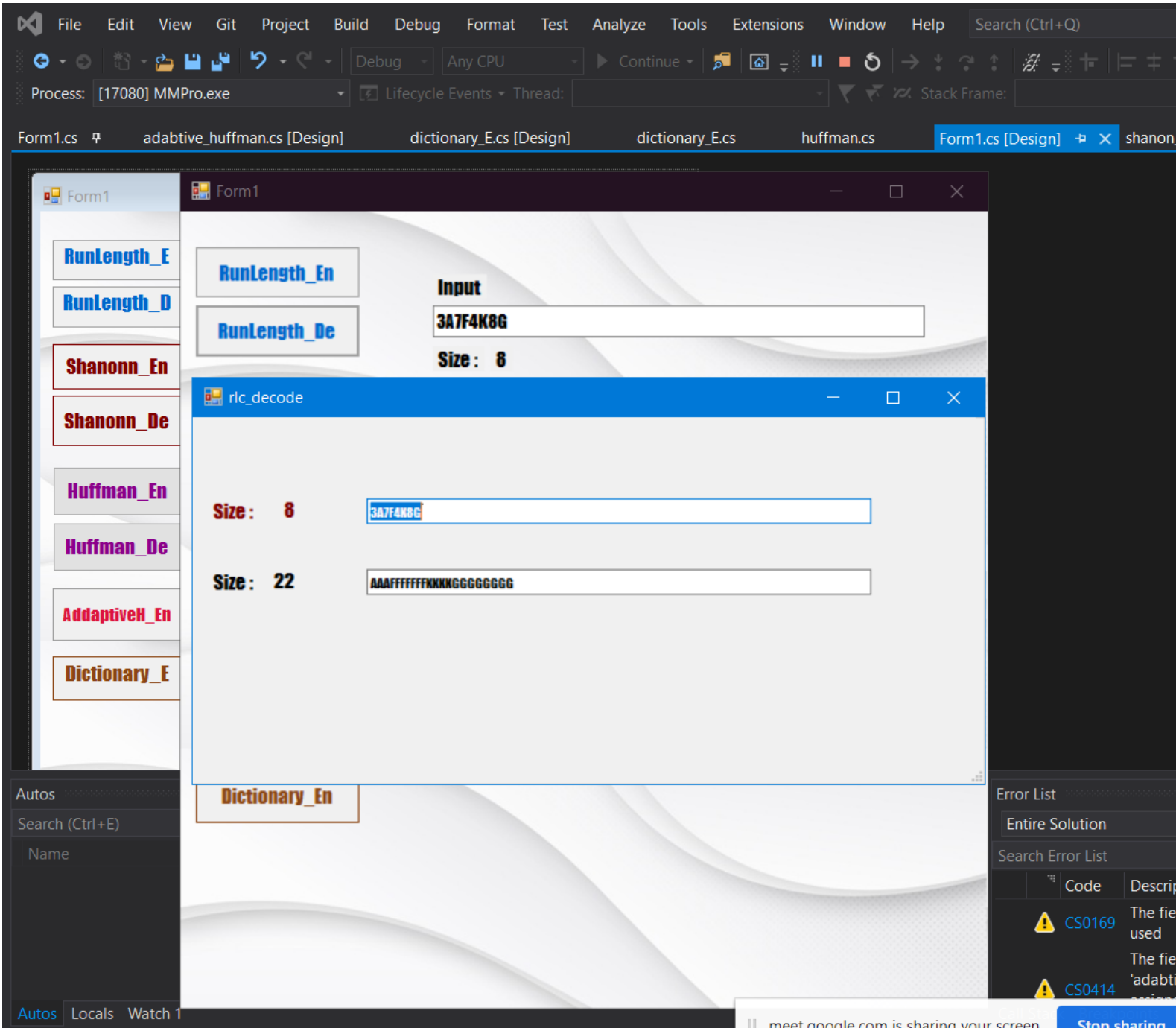
Run length algorithm

Run-length encoding (RLE) is a form of lossless data compression in which runs of data (sequences in which the same data value occurs in many consecutive data elements) are stored as a single data value and count, rather than as the original run. This is most useful on data that contains many such runs.



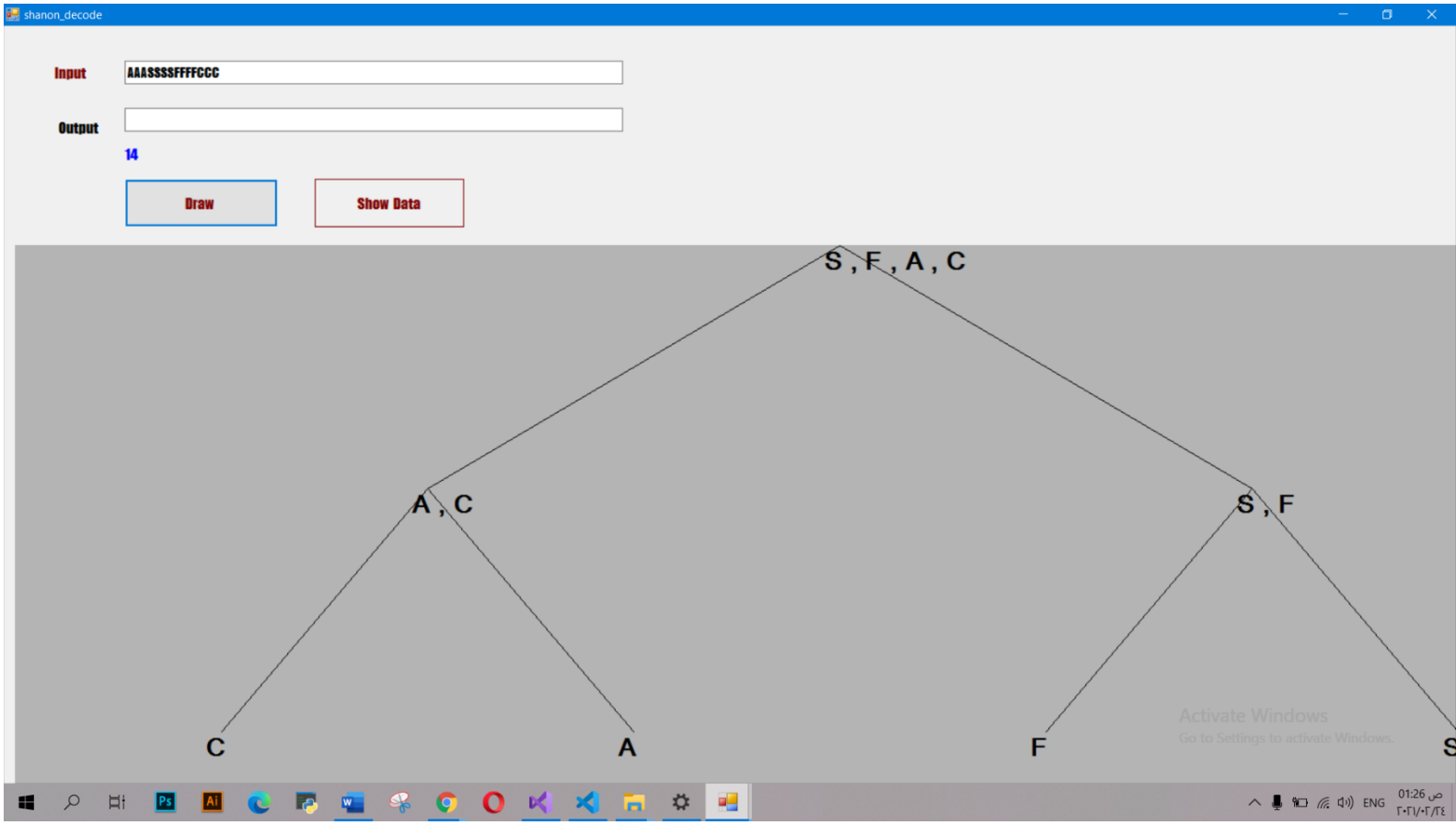
Run length Decoding algorithm:

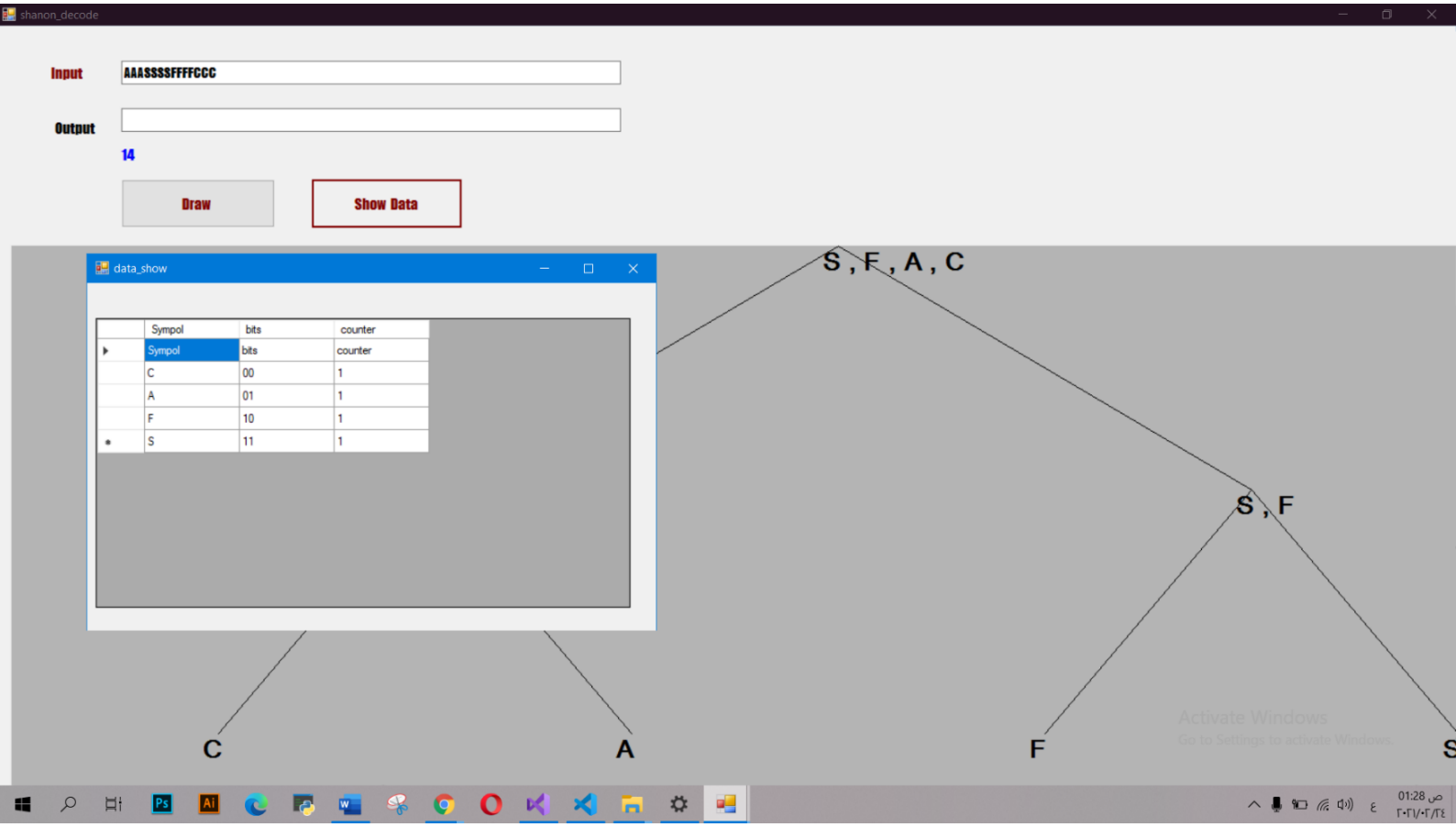
Run-length decoding (RLE) is a form of lossless data compression in which runs of data (sequences in which the same data value occurs in many consecutive data elements) are stored as an alphanumeric data and count, rather than as the original run. This is most useful on data that contains many such runs, in this window you put alphanumeric data compressed then the algorithm decompresses it



Shannon algorithm:

is a lossless data compression technique for constructing a prefix code based on a set of symbols and their probabilities (estimated or measured) It is a variable length encoding scheme, that is, the codes assigned to the symbols will be of varying length, this window you put a string input and then starts to draw the tree and also you could show its bits like shown in data show form.

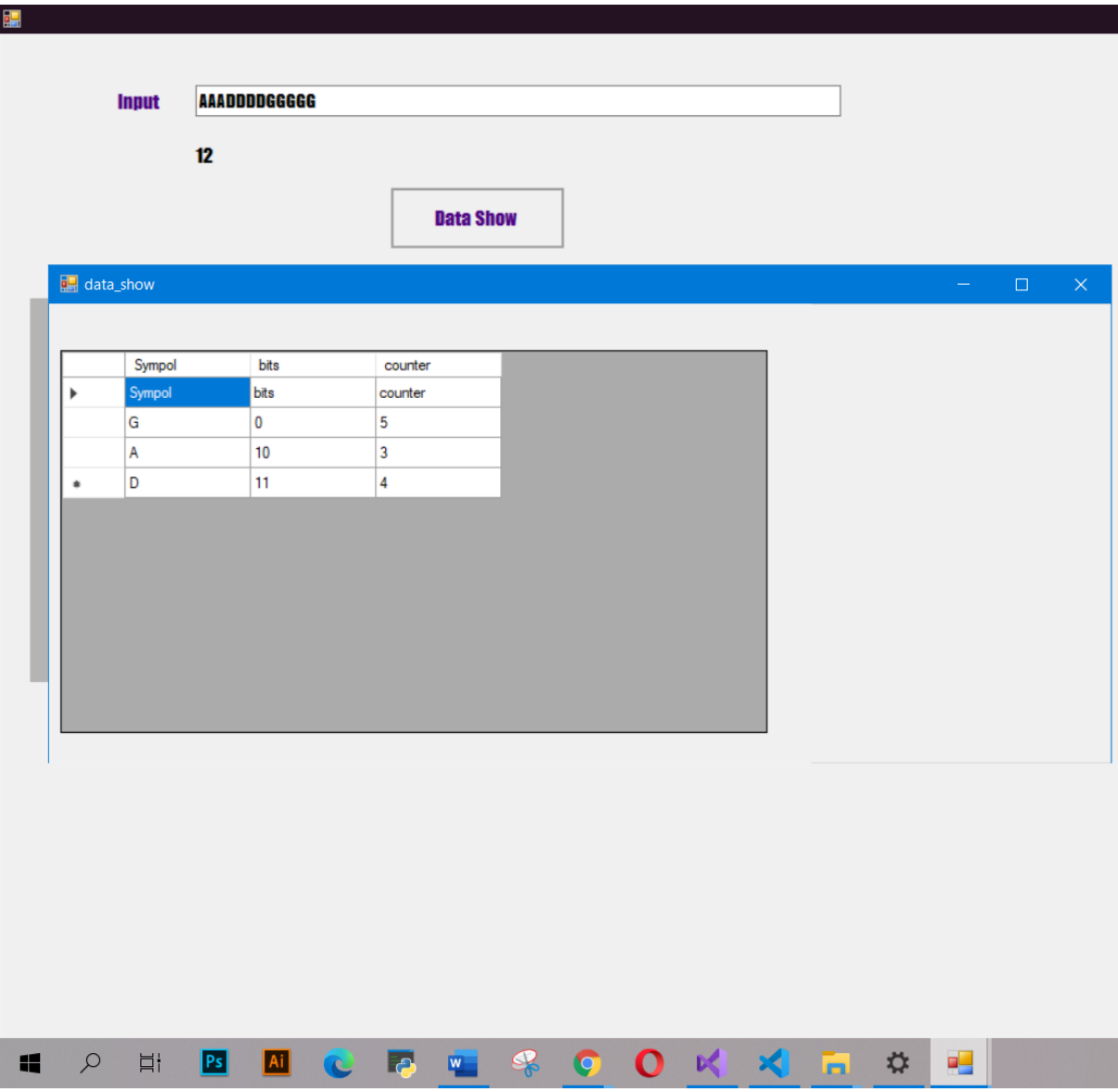



shanon_decode
Input
AAASSSSFFFFCCC
Output
14
Draw
Show Data
data_show
Sympol
bits
counter
C
00
1
A
01
1
F
10
1
S
11
1
S , F , A , C
S , F
C
A
F
Activate Windows
Go to Settings to activate Windows.

Huffman code

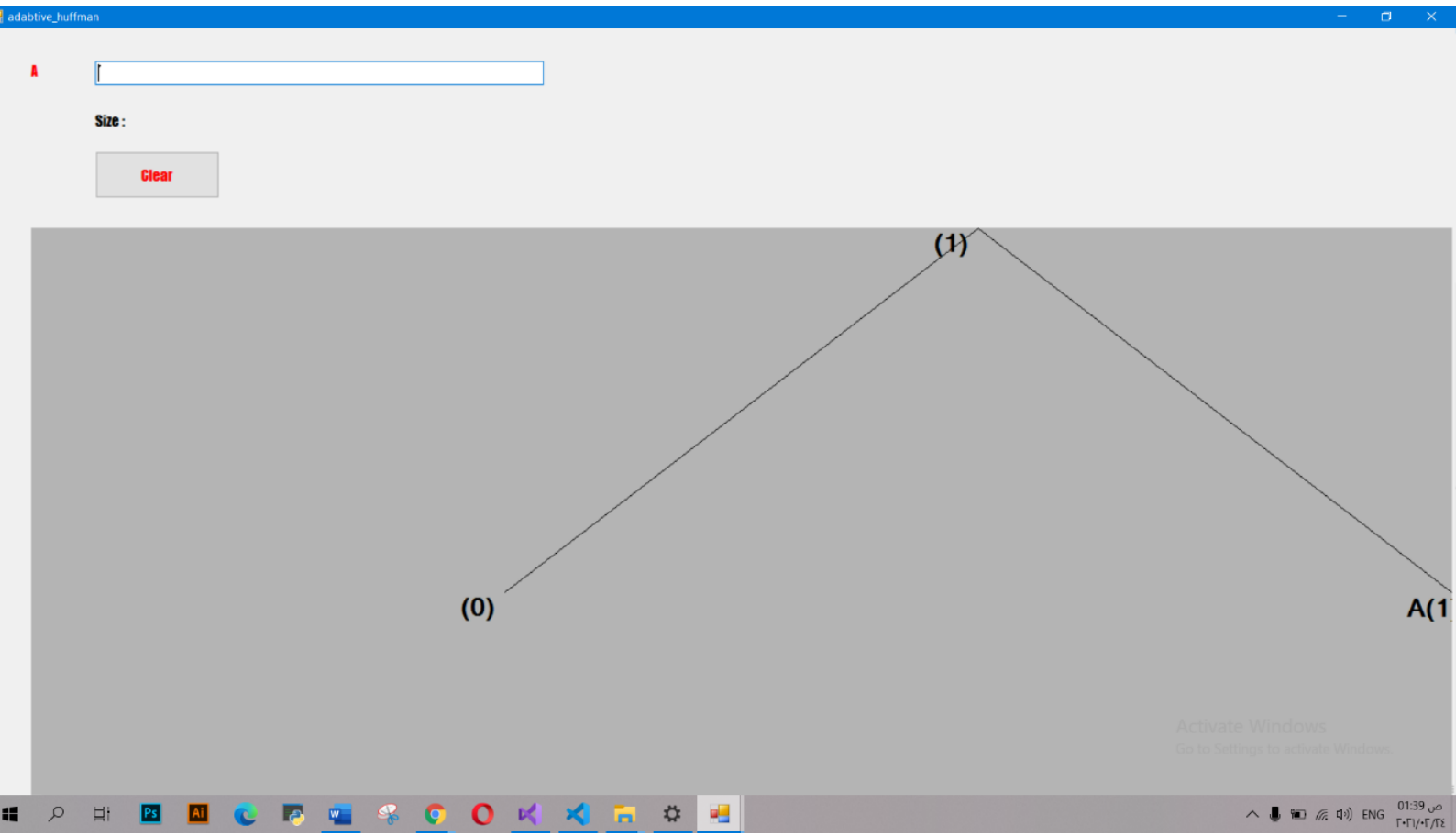
is a way to encode information using variable-length strings to represent symbols depending on how frequently they appear. The idea is that symbols that are used more frequently should be shorter while symbols that appear more rarely can be longer

Huffman code assigns codes to characters such that the length of the code depends on the relative frequency or weight of the corresponding character

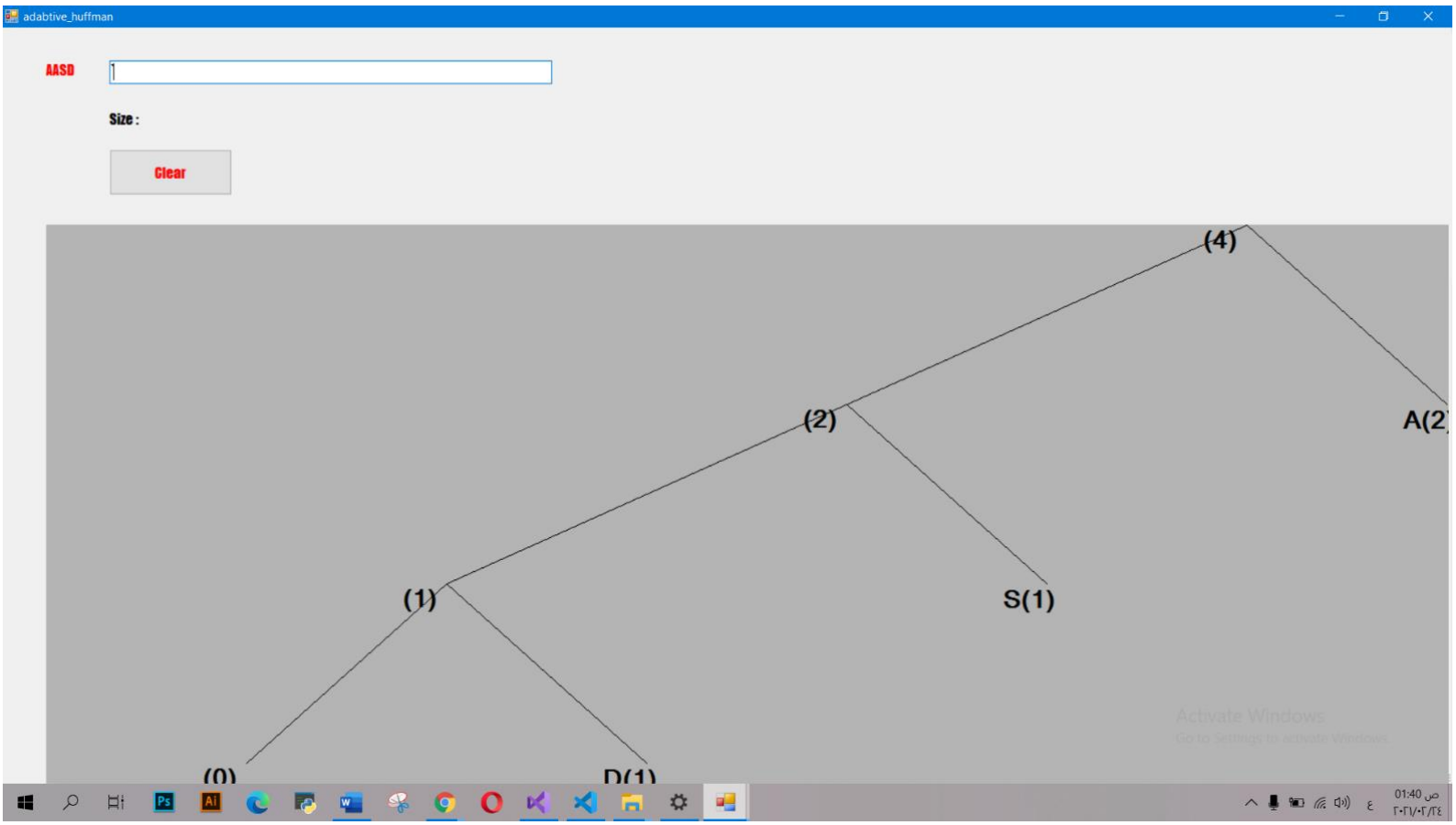


Adaptive Huffman algorithm

is an adaptive coding technique based on Huffman coding. It permits building the code as the symbols are being transmitted, having no initial knowledge of source distribution, that allows one-pass encoding and adaptation to changing conditions in data, . In adaptive Huffman coding, the character will be inserted at the highest leaf possible to be decoded, before eventually getting pushed down the tree by higher-frequency characters. And in this window when you starts write a



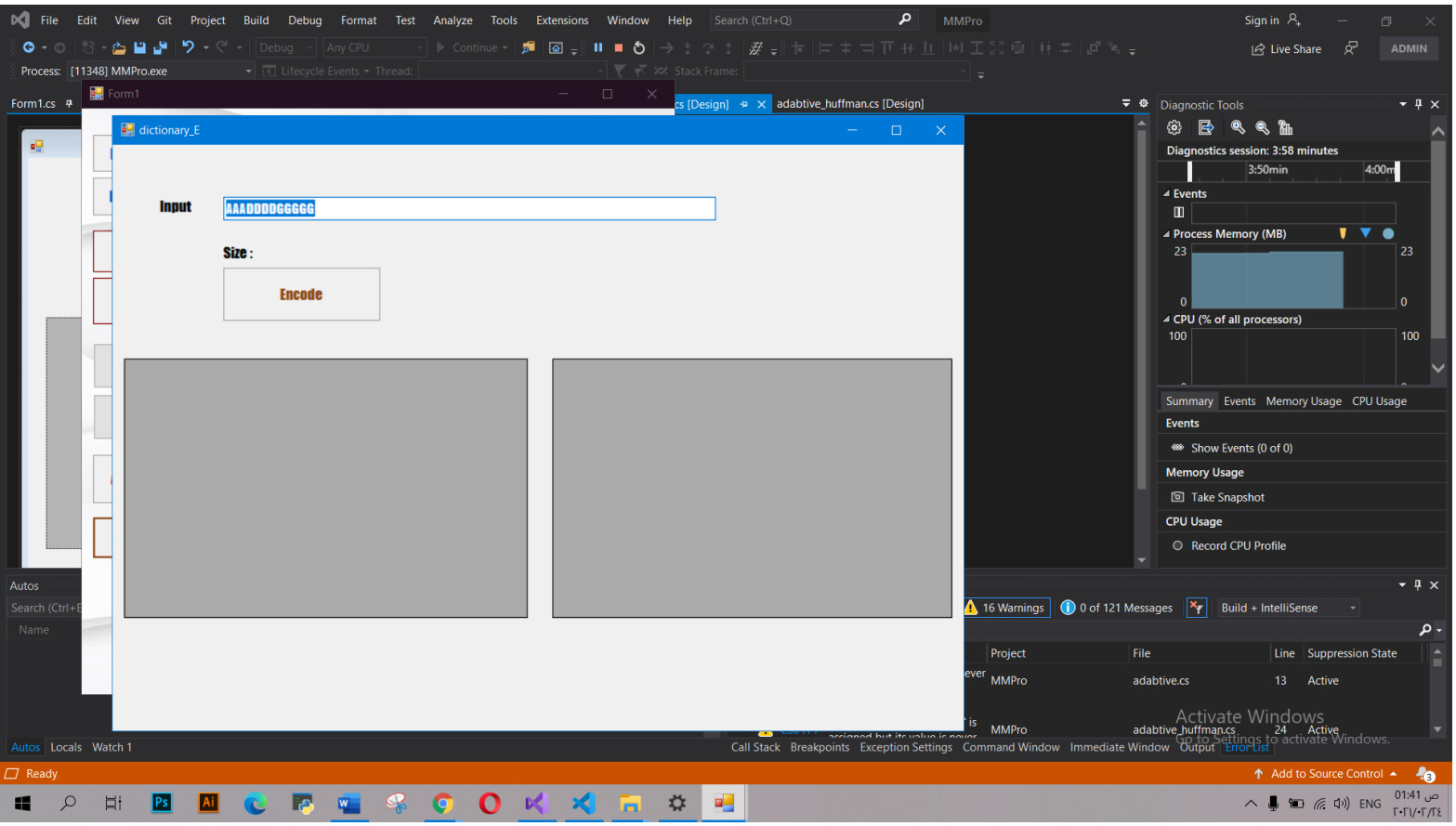
string the draw optimistically drawn

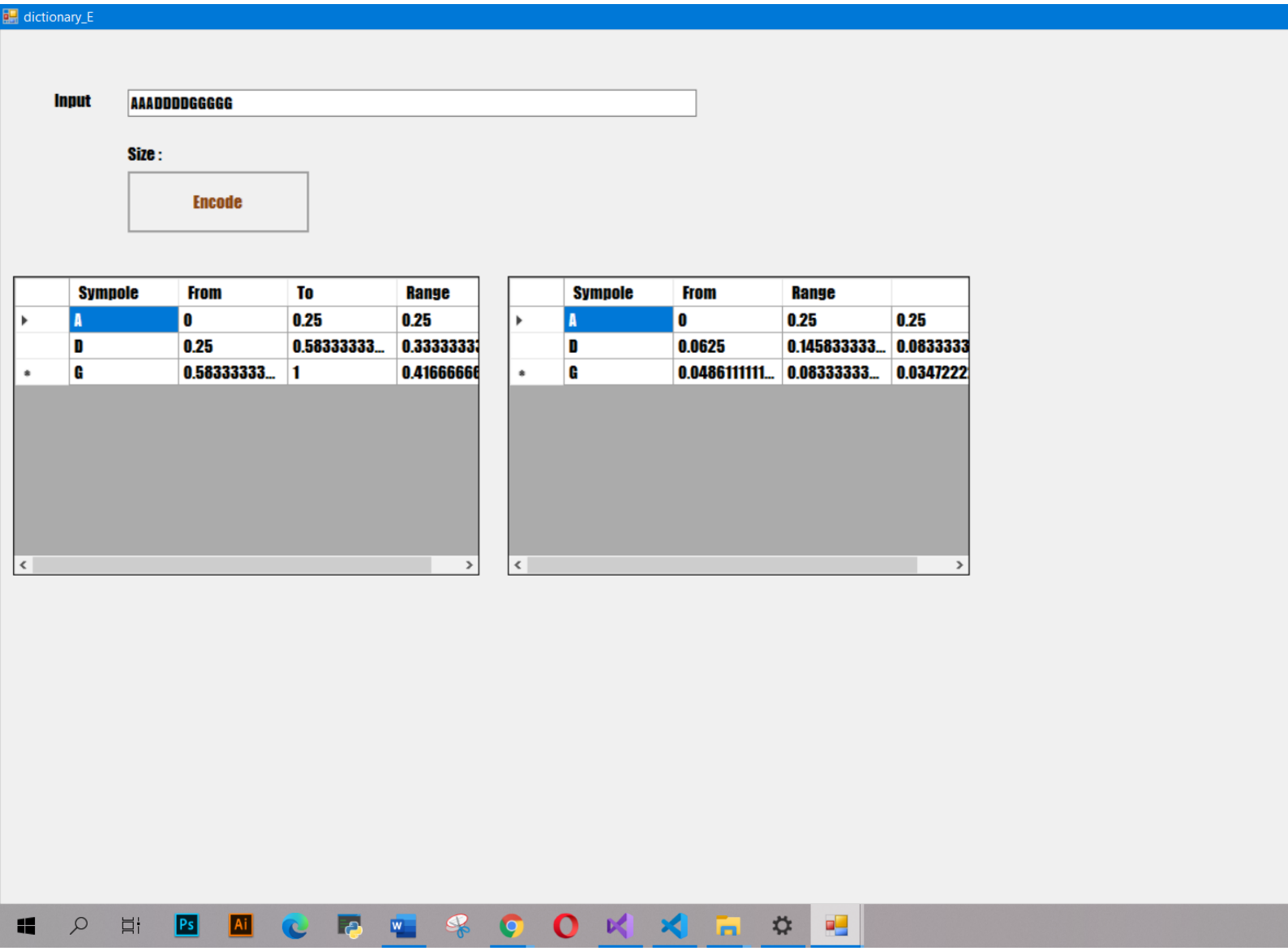

adabtive_huffman
AASD
1
Size :
Clear
(4)
(2)
A(2
(1)
S(1)
(0)
D(1)
Activate Windows
Go to Settings to activate Windows.
ص 01:40
٢٠٢١/٠٢/٢٤

Lzw

is a class of lossless data compression algorithms which operate by searching for matches between the text to be compressed and a set of strings contained in a data structure (called the 'dictionary') maintained by the encoder. When the encoder finds such a match, it substitutes a reference to the string's position in the data structure

The LZW algorithm is a greedy algorithm in that it tries to recognize increasingly longer and longer phrases that are repetitive, and encode them.




dictionary_E
Input
AAADDDDGGGGG
Size :
Encode
Sympole From To Range
A 0 0.25 0.25
D 0.25 0.58333333... 0.3333333
G 0.58333333... 1 0.4166666
Sympole From Range
A 0 0.25 0.25
D 0.0625 0.145833333... 0.0833333
G 0.0486111111... 0.08333333... 0.0347222