UZipDotNet Rev 1.0 2012/03/30

Source Files

The UZipDotNet project is made of the following source files.

Original source code

Original source code developed by the author.

AddFilesAndFoldersForm.cs: Windows form allowing the user to select files and folders to be included in the ZIP archive.

ArchiveUpdateForm.cs: Dialog box. This warning dialog box will be displayed when a ZIP archive is open for extraction and the user wants to update the archive. It gives the user a choice to save the existing archive in the same directory or a copy in the recycle bin.

DeflateNoHeader.cs: Class designed to compress a file to another file without adding any header or trailer information. This class is derived from DeflateMethod class. Not used in this project.

DeflateZipFile.cs: Class designed to create a new ZIP archive or to update existing ZIP archive. The class has methods to add and delete files and directory paths. This class is derived from DeflateMethod.

DeflateZLib.cs: Class designed to compress a file to another file. The compressed file will have ZLIB header and Adler32 checksum at the end of the file. This class is derived from DeflateMethod class. This class is used by the application to test the compression software.

ExceptionReport.cs: Class designed to produce a meaningful error message from Exception class. The compress and decompress routines are enclosed by a try block. If the code generate an exception the catch clause will produce an Exception object. The ExceptionReport class translates this message to an error message including the source module and line number that generated the throw command.

ExtractSelectionForm.cs: Windows form allowing the user to select compressed files for extraction from the open ZIP archive.

InflateNoHeader.cs: Class designed to decompress a file to another file. The input file has no header or trailer information. This class is derived from InflateMethod class. Not used in this project.

InflateZipFile.cs: Class designed to read an existing ZIP archive. The class has a method to extract individual files from the ZIP archive. This class is derived from InflateMethod.

InflateZLib.cs: Class designed to decompress a file to another file. The decompressed file will have ZLIB header and Adler32 checksum at the end of the file. This class is derived from InflateMethod class. This class is used by the application to test the decompression software.

ProcessFilesForm.cs: Windows form allowing the user to view the progress of either compression or decompression to and from ZIP archive.

ProgramState.cs: Class designed to save persistent program information to UZipDotNetState.xml file.

Trace.cs: Class designed to save tracing information to UZipDotNetTrace.txt file.

UZipDotNet.cs: This is the main Windows form of this application. It displays the revision number and date and the copyright information. Once a ZIP file is open or created, it displays the list of files in the archive.

ZipDirectory.cs: Class designed to hold the ZIP archive central directory information in memory.

ZLibTestForm.cs: Dialog box allowing the user to test compression and decompression of one file. The user selects a file, the program will compress it using DeflateZLib, DeflateMethod and DeflateTree classes. Immediately after the compression is done the program will decompress the file using InflateZLib, InflateMethod and InflateTree classes. It is a very effective way to test the deflate/inflate software.

Derivative work compression source code

Source code based on the work of Mike Krueger. Some sections are original development by the author. Other sections are reorganized and modified with respect to the base code.

DeflateMethod.cs: Class designed to compress one file using the Deflate method of compression.

DeflateTree.cs: Support class designed to build a translation tree between codes and variable length bit codes. It is based on Huffman coding. Frequently used codes get short bit strings codes and infrequently used codes get longer bit strings codes. The DeflateMethod class uses three instants of this class for the three trees used in the program.

InflateMethod.cs: Class designed to decompress one file using the Deflate method of compression.

InflateTree.cs: Support class designed to build a translation tree between variable length bit strings and codes. It is based on Huffman coding. Frequently used codes get short bit strings codes and infrequently used codes get longer bit strings codes. The InflateMethod class uses three instants of this class for the three trees used in the program.

Derivative work universal functions source code

Source code based on generally available universal functions.

Adler32.cs: Adler 32 bit checksum.

BitReverse.cs: Reverse the bits of a 16 bit unsigned integer.

CRC32.cs: CRC32 checksum.

Visual Studio generated source code

Source code generated by Visual Studio development environment.

Program.cs: Visual studio Main() program.

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