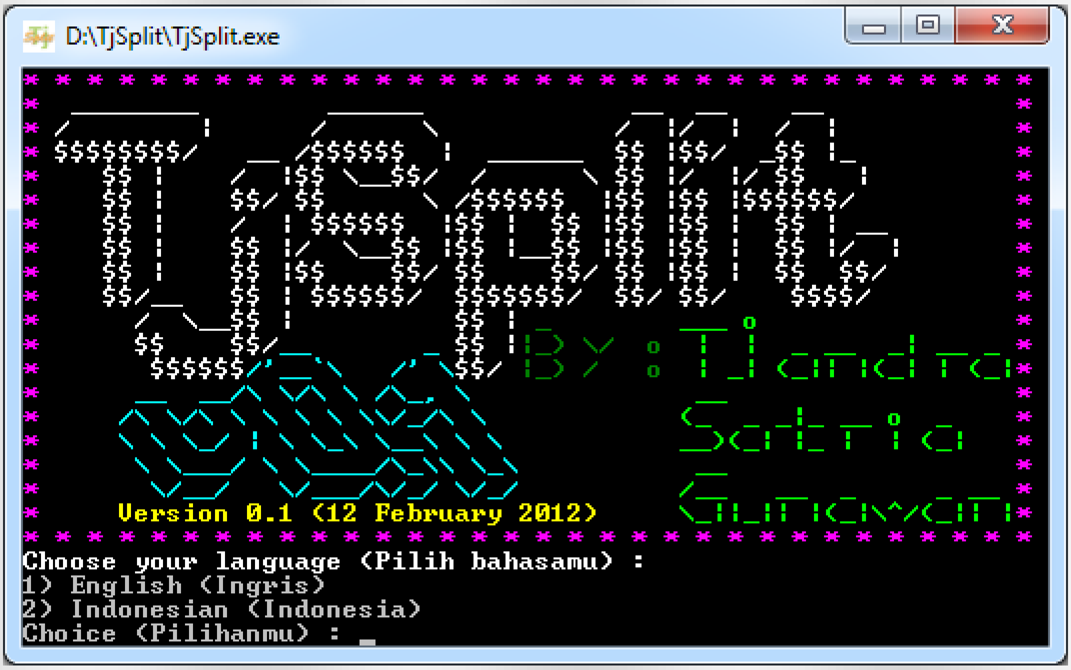


D:\TjSplit\TjSplit.exe

```
     Version 0.1 (12 February 2012)
Choose your language (Pilih bahasamu) :
1) English (Ingris)
2) Indonesian (Indonesia)
Choice (Pilihanmu) : _
```

TjSplit Manual Book

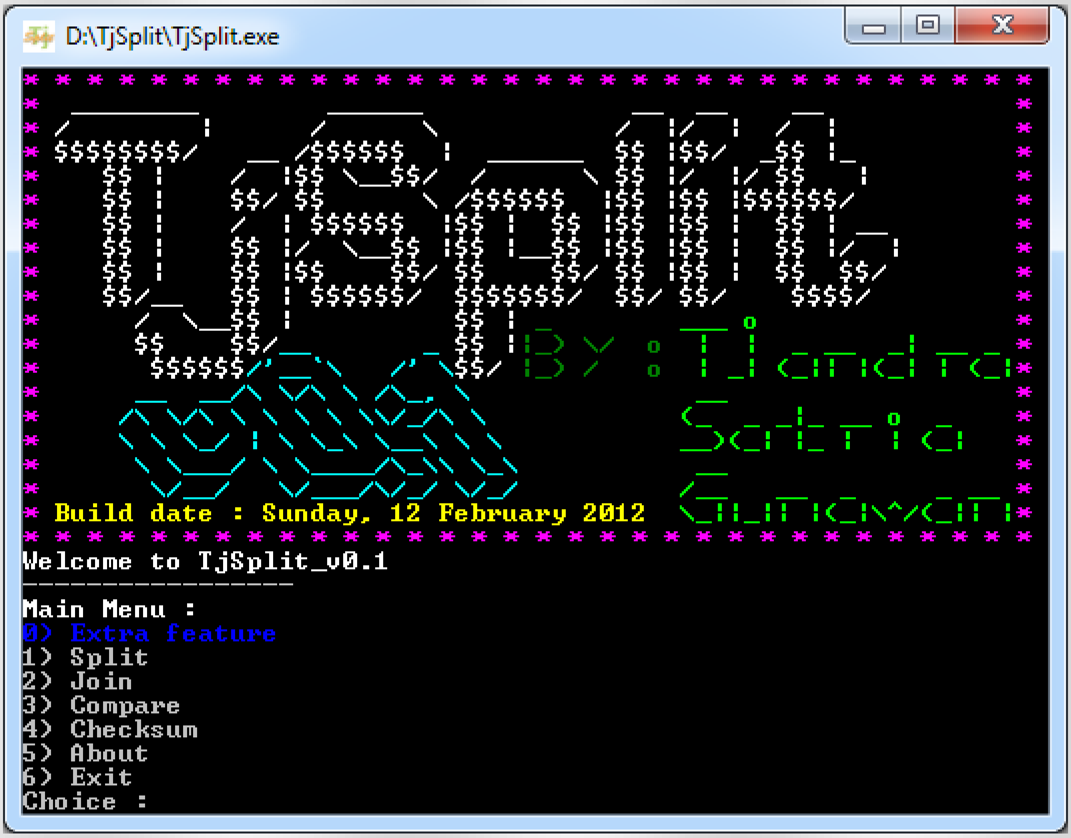
Version 0.1

By : Tjandra SG

Table of content :

TjSplit v0.1 Feature :

TjSplit v0.1 is the first release of the program TjSplit, although this is the first version, but TjSplit v0.1 already has many features which consists of 4 main features, and 4 additional features.



```
* Build date : Sunday, 12 February 2012
Welcome to TjSplit_v0.1
-----------------
Main Menu :
0) Extra feature
1) Split
2) Join
3) Compare
4) Checksum
5) About
6) Exit
Choice :
```

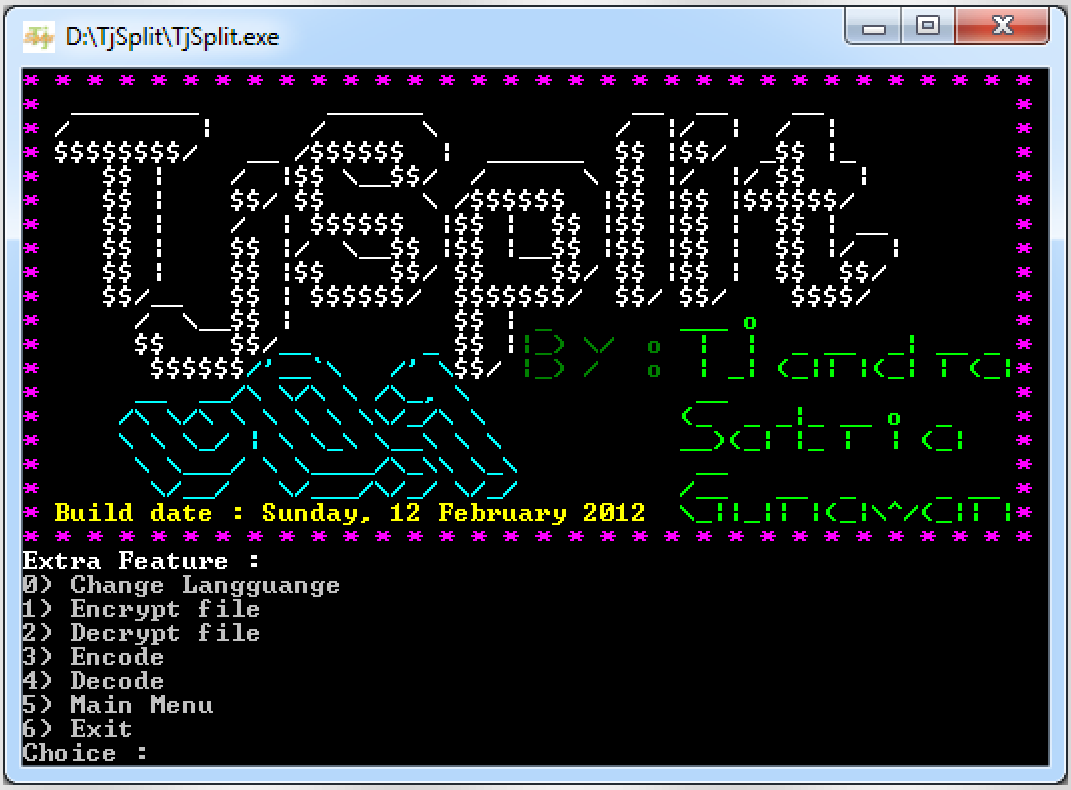
TjSplit is a software designed to **cut (split)** the data and **merge (Join)** some data into one. TjSplit also has two type of comparison feature :

- **Compare** 2 data directly, consists of two modes, namely:
    - Check whether the data is really equal.
    - Check whether any of the data is a part / pieces of other data.

- **Checksum**

Each data must have an unique checksum, although there is the possibility of two data to have the same checksum, but the probability is very small, about 1 / [2 ^ (bit-checksum)], so if the 2 data has same checksum then the probability of this two data is equal is VERY high. TjSplit v0.1 provides 5 types of checksum :

  - SHA-2 checksum which has four variations of the output bit, namely SHA-224, SHA-256, SHA-384, and SHA-512. (The second best and safest checksum in early 2012).
  - SHA-1 checksum, 160-bit (an earlier version of SHA-2).
  - RIPE-MD checksum, 160-bit (no attack until now, checksum with this algorithm still always unique)
  - MD5 checksum, 128 bit (although the uniqueness of this checksum is only 1 / [2 ^ (24.1)], but this checksum is most commonly used today mainly by spliter program).
  - Ceksum64, 64 bit (actually very weak and this checksum is not used, but to commemorate the history of the existing first checksum, v0.1 TjSplit provide it to you).



```
Build date : Sunday, 12 February 2012
Extra Feature :
0) Change Langguange
1) Encrypt file
2) Decrypt file
3) Encode
4) Decode
5) Main Menu
6) Exit
Choice :
```

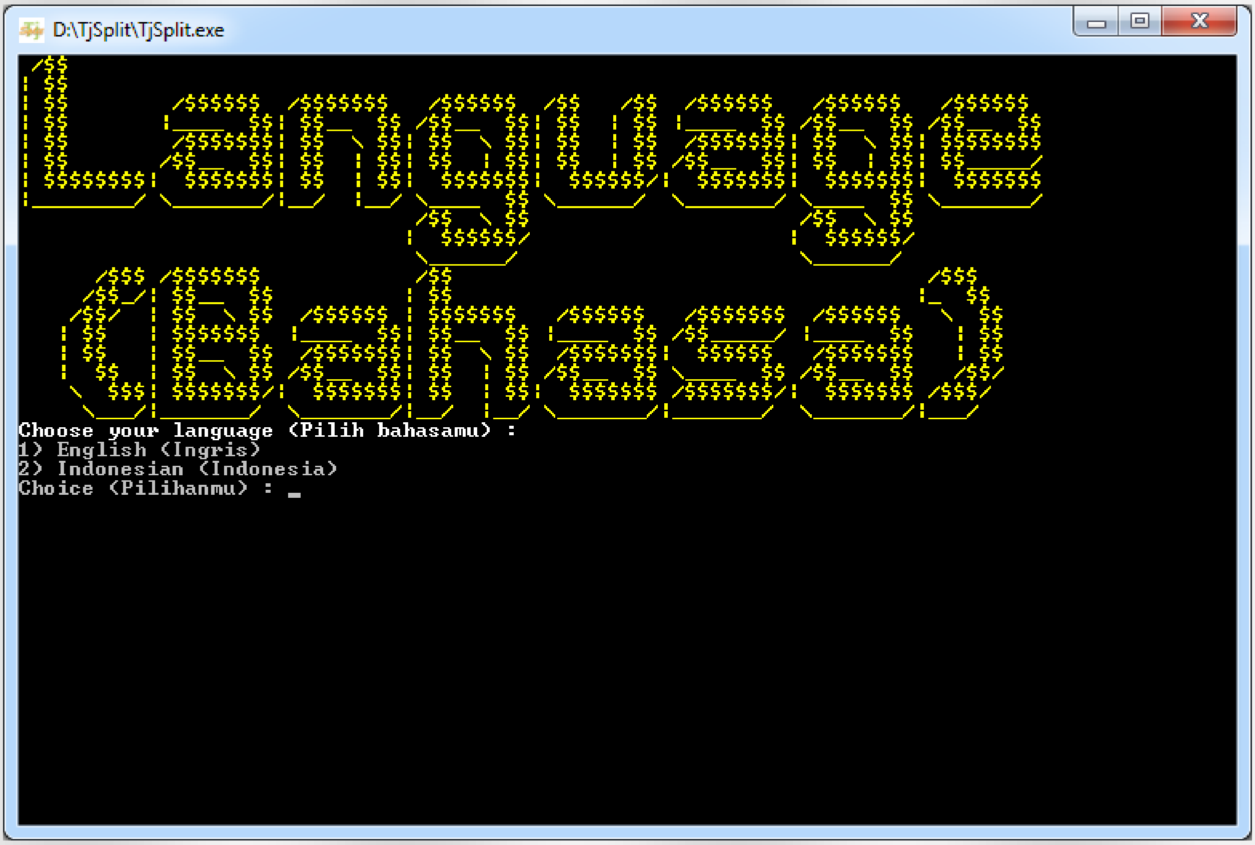
In addition to the four main features (in bold) above, TjSplit v0.1 has four additional features for the benefit of cryptology (lock data) and coding data :

- **Encrypt** is a feature to lock data with a key that can be either a file key or a text key, the type of encryption supported by TjSplit v0.1 is XOR encryption and One-Time-Pad encryption.
- **Decrypt** is a feature to unlock the encrypted data with a key that can be either a file key or a text key, type of decryption supported by TjSplit v0.1 is XOR encryption and One-Time-Pad encryption.
- **Encode** is a feature to convert binary data into text data that can be read by a text editor such as notepad, WordPad, etc.. Type of encoding that is supported by TjSplit v0.1 are:
    - Binary, which is a base number two, are symbolized using numbers 0 and 1.
    - Hexadecimal, which is the base number 16, is symbolized using numbers plus six letters a, b, c, d, e, and f.

- MIME, which is the base number 64, is symbolized using the alphabet of capital, small alphabet, numbers, and symbols '+' and '/'. Padded using the character =. (The current best coding type).

- **Decode** is the inverse of the encoding process, decode convert plain text into a true binary data or restore data that has been encoded into the text back into the original data. Type of decoding is supported by TjSplit v0.1 is binary, hexsadesimal, and MIME.

TjSplit also supports two languages : Indonesian language, and English language.



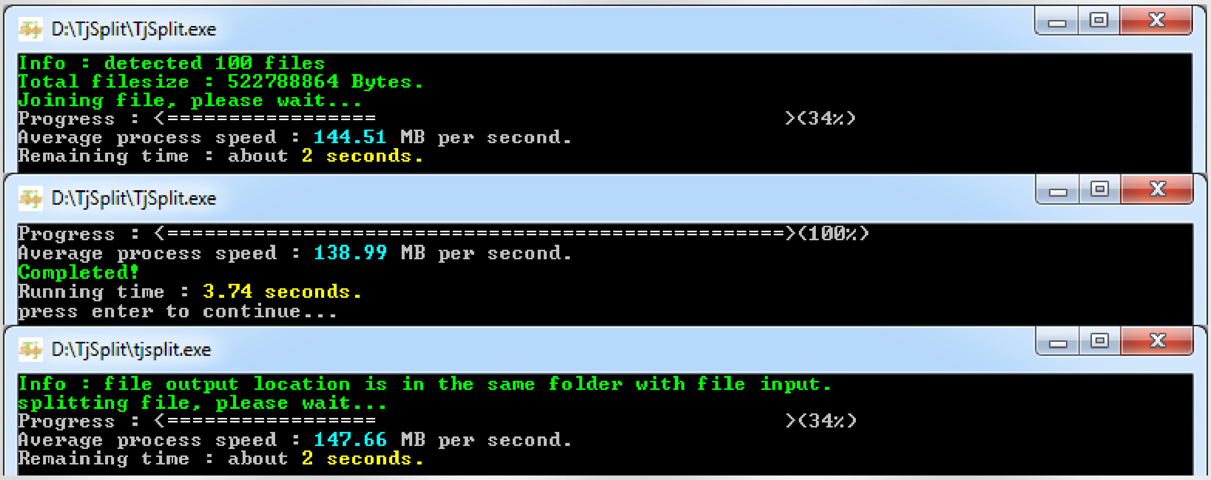
```
Choose your language (Pilih bahasamu) :
1) English (Ingris)
2) Indonesian (Indonesia)
Choice (Pilihanmu) : _
```

Disadvantages and Advantages of the TjSplit v0.1 Compared with other splitters :

Striking weakness/disadvantages of TjSplit v0.1 is on the GUI (Graphic User Interface) that allows users to interact easily with the program. TjSplit v0.1 using GUI-based console/CMD/terminal only, but the other spliter program has been using Windows GUI.

Many advantages of TjSplit v0.1 compared with other spliter program :

1) By using a highly efficient algorithm, the processing speed is much faster than the other spliter programs.



```
Info : detected 100 files
Total filesize : 522788864 Bytes.
Joining file, please wait...
Progress : <=================                                 >(34%)
Average process speed : 144.51 MB per second.
Remaining time : about 2 seconds.
```

```
Progress : <==================================================>(100%)
Average process speed : 138.99 MB per second.
Completed!
Running time : 3.74 seconds.
press enter to continue...
```

```
Info : file output location is in the same folder with file input.
splitting file, please wait...
Progress : <=================                                 >(34%)
Average process speed : 147.66 MB per second.
Remaining time : about 2 seconds.
```

2) The existence of speed indicator and the estimated remaining time plus an accurate progress bar and percentage of task completeness.

3) With only 36 KB memory buffer per process then this program is very efficient in RAM memory consumption. RAM consumption of this program is less than 2 MB.

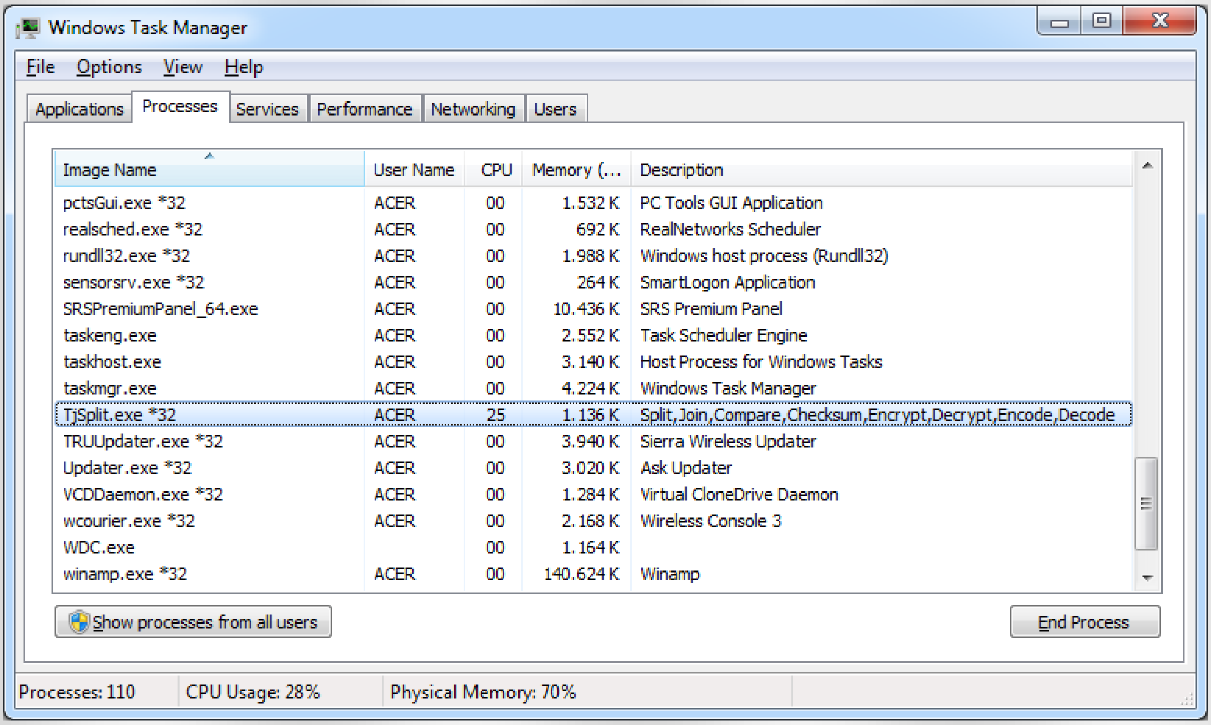
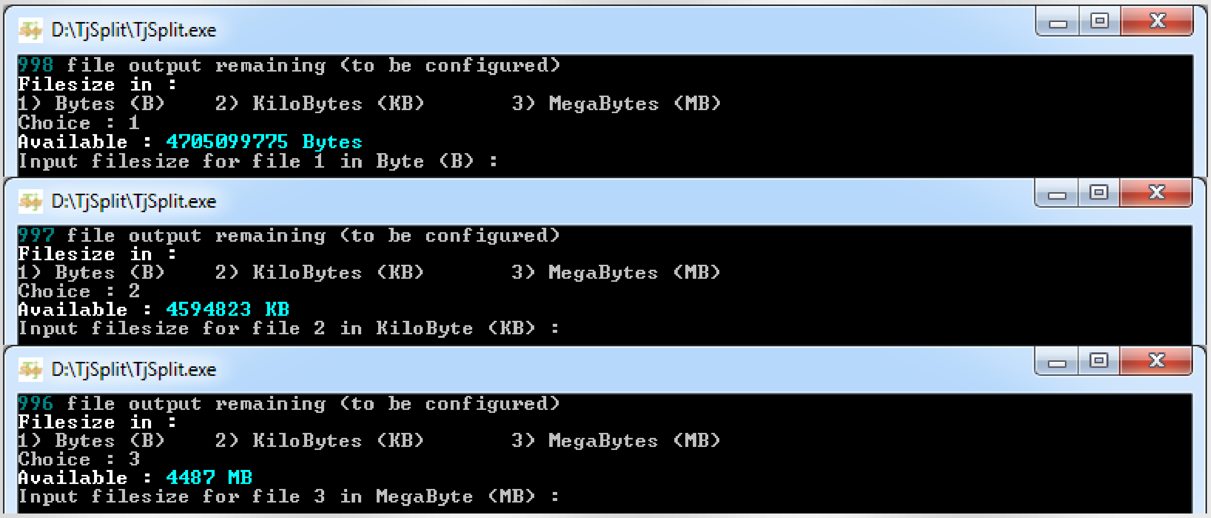

Windows Task Manager
File Options View Help
Applications Processes Services Performance Networking Users
Show processes from all users
End Process

Image Name	User Name	CPU	Memory (...	Description
pctsGui.exe *32	ACER	00	1.532 K	PC Tools GUI Application
realsched.exe *32	ACER	00	692 K	RealNetworks Scheduler
rundll32.exe *32	ACER	00	1.988 K	Windows host process (Rundll32)
sensorsrv.exe *32	ACER	00	264 K	SmartLogon Application
SRSPremiumPanel_64.exe	ACER	00	10.436 K	SRS Premium Panel
taskeng.exe	ACER	00	2.552 K	Task Scheduler Engine
taskhost.exe	ACER	00	3.140 K	Host Process for Windows Tasks
taskmgr.exe	ACER	00	4.224 K	Windows Task Manager
TjSplit.exe *32	ACER	25	1.136 K	Split,Join,Compare,Checksum,Encrypt,Decrypt,Encode,Decode
TRUUpdater.exe *32	ACER	00	3.940 K	Sierra Wireless Updater
Updater.exe *32	ACER	00	3.020 K	Ask Updater
VCDDaemon.exe *32	ACER	00	1.284 K	Virtual CloneDrive Daemon
wcourier.exe *32	ACER	00	2.168 K	Wireless Console 3
WDC.exe		00	1.164 K	
winamp.exe *32	ACER	00	140.624 K	Winamp

Processes: 110 CPU Usage: 28% Physical Memory: 70%

4) TjSplit v0.1 able to process files with a very large size (not "overflow" for files larger than 2GB, many other spliter is problematic for files larger than 2GB).

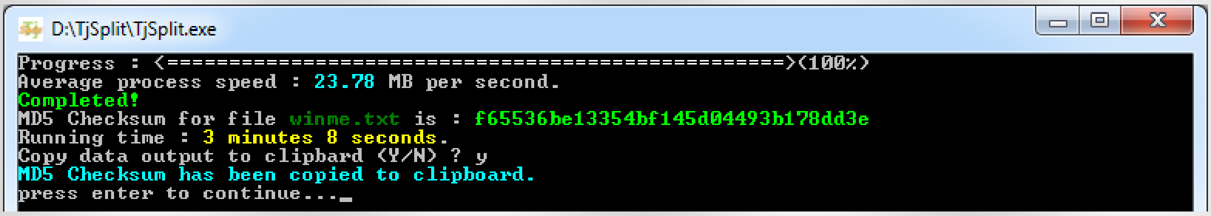


```
998 file output remaining (to be configured)
Filesize in :
1) Bytes (B)     2) KiloBytes (KB)       3) MegaBytes (MB)
Choice : 1
Available : 4705099775 Bytes
Input filesize for file 1 in Byte (B) :
```

```
997 file output remaining (to be configured)
Filesize in :
1) Bytes (B)     2) KiloBytes (KB)       3) MegaBytes (MB)
Choice : 2
Available : 4594823 KB
Input filesize for file 2 in KiloByte (KB) :
```

```
996 file output remaining (to be configured)
Filesize in :
1) Bytes (B)     2) KiloBytes (KB)       3) MegaBytes (MB)
Choice : 3
Available : 4487 MB
Input filesize for file 3 in MegaByte (MB) :
```

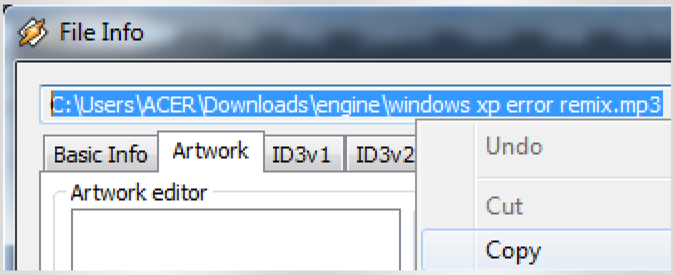
5) Can access clipboard, so you can copy the checksum and paste it in the place you want such as e-mail, text editor, browser, etc..



```
Progress : <==================================================>(100%)
Average process speed : 23.78 MB per second.
Completed!
MD5 Checksum for file winme.txt is : f65536be13354bf145d04493b178dd3e
Running time : 3 minutes 8 seconds.
Copy data output to clipbard (Y/N) ? y
MD5 Checksum has been copied to clipboard.
press enter to continue..._
```

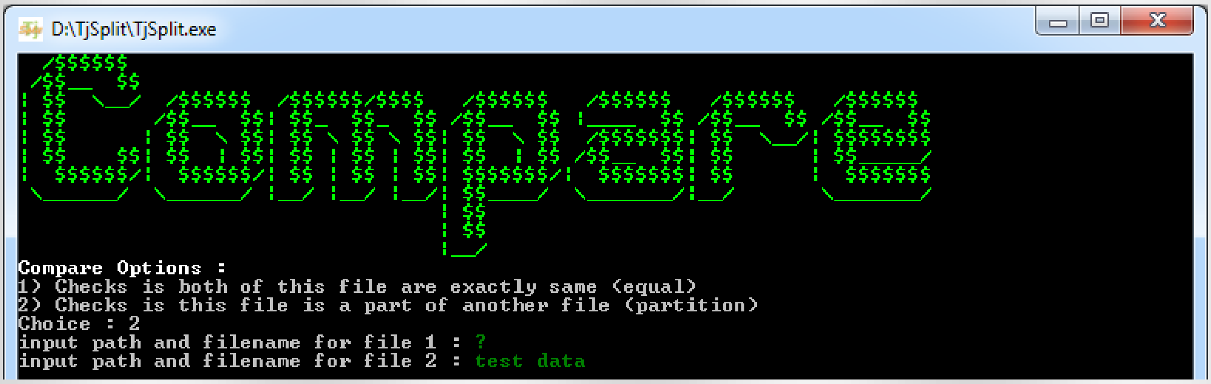
Tip: for paste data from clipboard to the input, input character '?' In the program as shown below:

Copy the location data from elsewhere



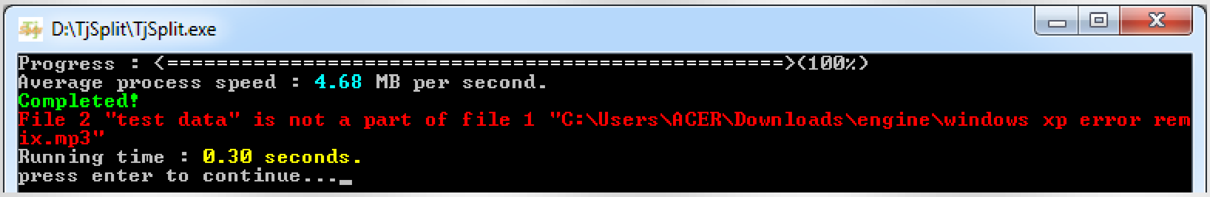
C:\Users\ACER\Downloads\engine\windows xp error remix.mp3

Paste symbolized by inputting '?' On the program TjSplit v0.1



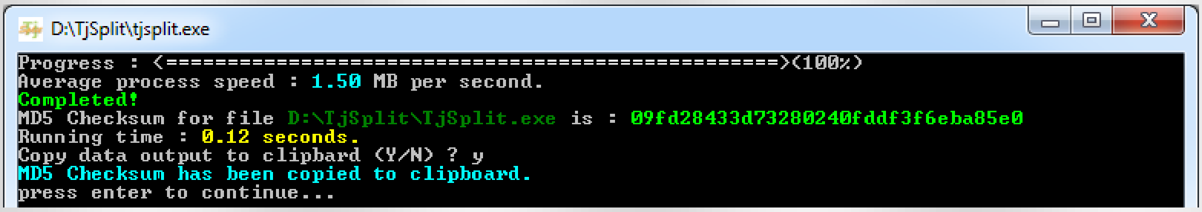
```
Compare Options :
1) Checks is both of this file are exactly same (equal)
2) Checks is this file is a part of another file (partition)
Choice : 2
input path and filename for file 1 : ?
input path and filename for file 2 : test data
```

Input ‘?’ is automatically replaced by data in the clipboard.



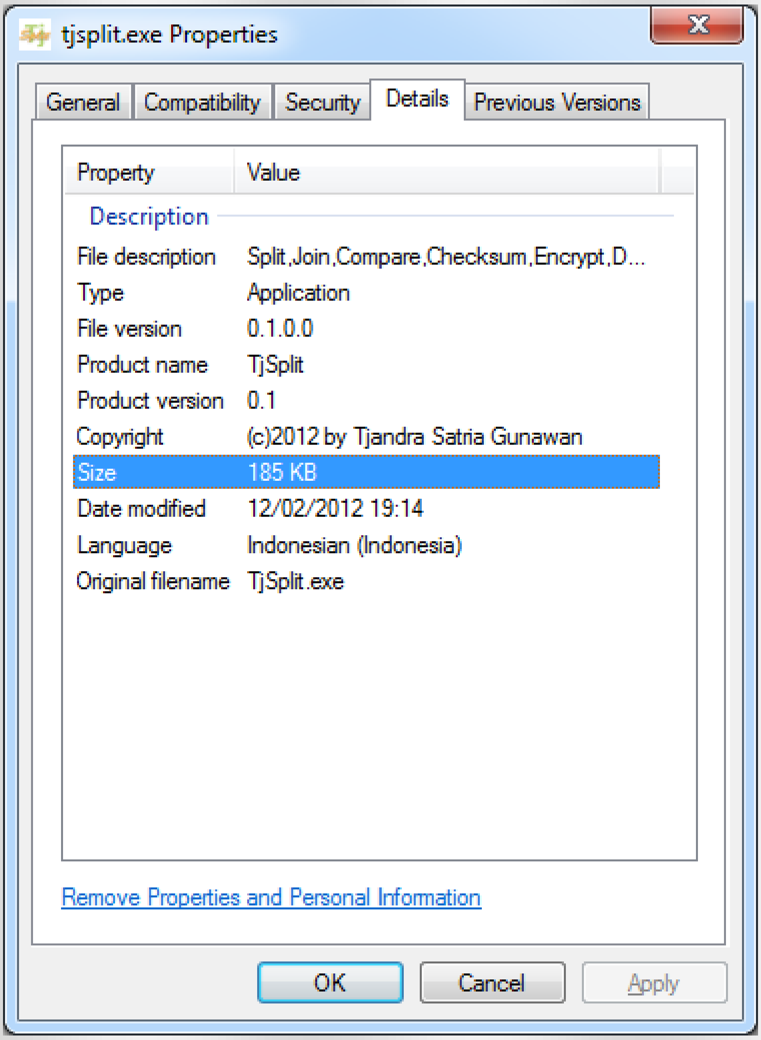
```
Progress : <==================================================>(100%)
Average process speed : 4.68 MB per second.
Completed!
File 2 "test data" is not a part of file 1 "C:\Users\ACER\Downloads\engine\windows xp error rem
ix.mp3"
Running time : 0.30 seconds.
press enter to continue..._
```

6) TjSplit v0.1 can read the data that being accessed by other applications, it can even create a checksum for itself.



```
Progress : <===================================================>(100%)
Average process speed : 1.50 MB per second.
Completed!
MD5 Checksum for file D:\TjSplit\TjSplit.exe is : 09fd28433d73280240fddf3f6eba85e0
Running time : 0.12 seconds.
Copy data output to clipbard (Y/N) ? y
MD5 Checksum has been copied to clipboard.
press enter to continue...
```

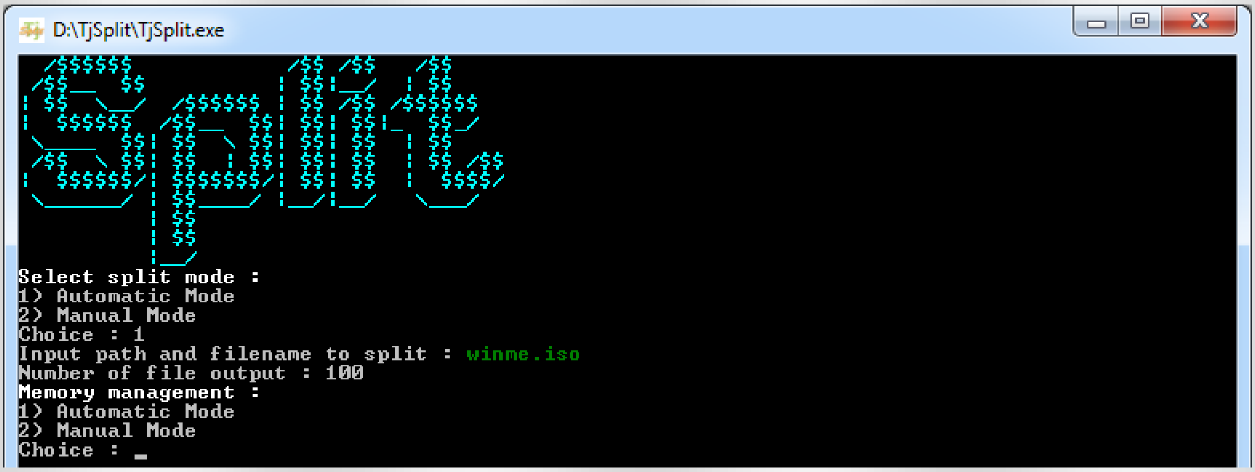
7) The size of executeable data is small, only 185 KB.



Property	Value
Description	
File description	Split,Join,Compare,Checksum,Encrypt,D...
Type	Application
File version	0.1.0.0
Product name	TjSplit
Product version	0.1
Copyright	(c)2012 by Tjandra Satria Gunawan
Size	185 KB
Date modified	12/02/2012 19:14
Language	Indonesian (Indonesia)
Original filename	TjSplit.exe

Use of TjSplit v0.1 :

1) <u>**Split**</u>

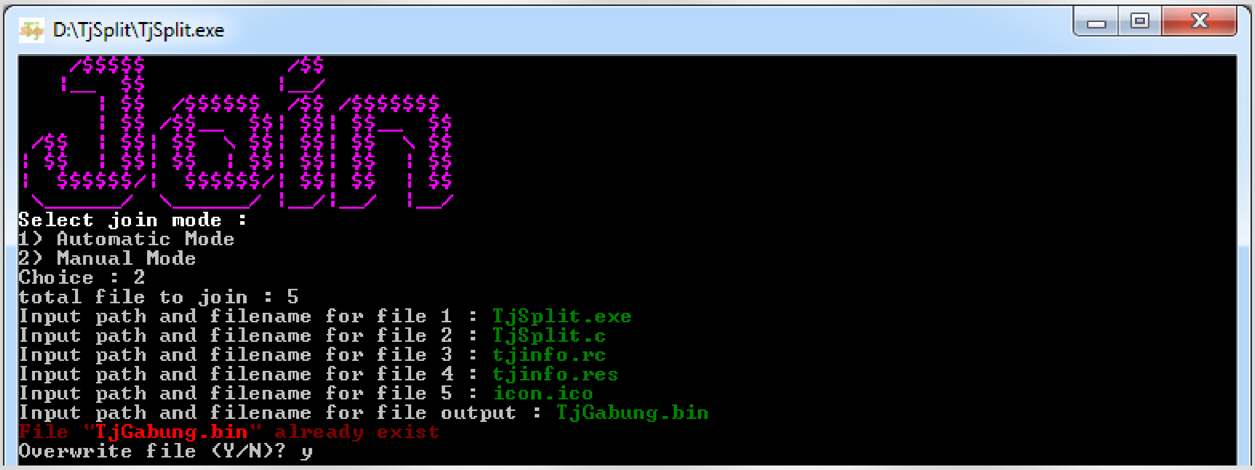


```
  /$$$$$$            /$$ /$$   /$$
 /$$__  $$          | $$|__/  | $$
| $$  \__/  /$$$$$$ | $$ /$$ /$$$$$$
|  $$$$$$  /$$__  $$| $$| $$|_  $$_/
 \____  $$| $$  \ $$| $$| $$  | $$
 /$$  \ $$| $$  | $$| $$| $$  | $$ /$$
|  $$$$$$/| $$$$$$$/| $$| $$  |  $$$$/
 \______/ | $$____/ |__/|__/   \___/
          | $$
          | $$
          |__/
Select split mode :
1) Automatic Mode
2) Manual Mode
Choice : 1
Input path and filename to split : winme.iso
Number of file output : 100
Memory management :
1) Automatic Mode
2) Manual Mode
Choice : _
```

TjSplit provides 2 splitting mode : automatic mode (the name of output file names will be equal to original file but with the extension * .001, * .002, etc.), and manual mode (output can be set as you like). Then you will be asked how many output is desired, TjSplit v0.1 is able to cut the file from 1 to 999. Then there are two memory settings for mode, the automatic mode and manual mode.

- Automatic memory mangement, each piece of data will be the original data size divided by the number of data output.
- Manual memory magement, you will be prompted for a file size of “file n” in the unit (byte or KB or MB).

2) Join

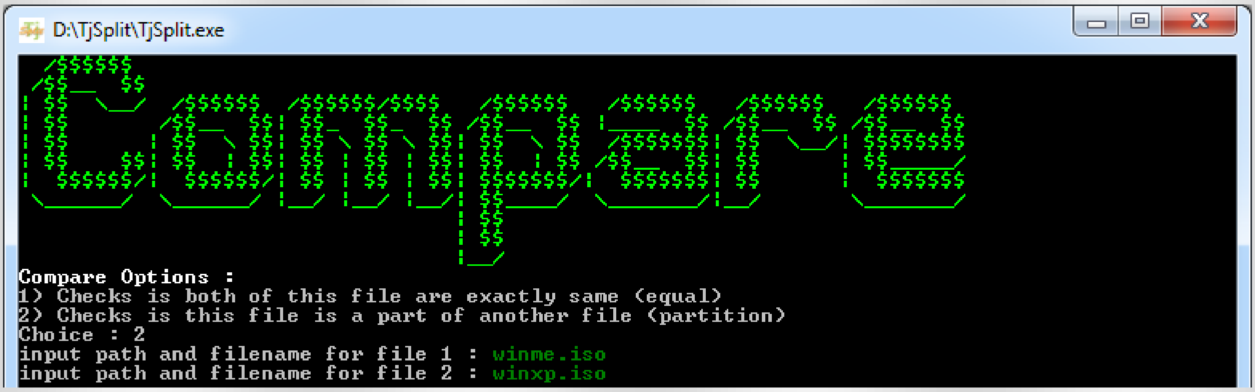


D:\TjSplit\TjSplit.exe

```
   /$$$$$           /$$
  |__  $$          |__/
     | $$  /$$$$$$  /$$ /$$$$$$$
     | $$ /$$__  $$| $$| $$__  $$
/$$  | $$| $$  \ $$| $$| $$  \ $$
| $$  | $$| $$  | $$| $$| $$  | $$
|  $$$$$$/|  $$$$$$/| $$| $$  | $$
 \______/  \______/ |__/|__/  |__/
Select join mode :
1) Automatic Mode
2) Manual Mode
Choice : 2
total file to join : 5
Input path and filename for file 1 : TjSplit.exe
Input path and filename for file 2 : TjSplit.c
Input path and filename for file 3 : tjinfo.rc
Input path and filename for file 4 : tjinfo.res
Input path and filename for file 5 : icon.ico
Input path and filename for file output : TjGabung.bin
File "TjGabung.bin" already exist
Overwrite file (Y/N)? y
```

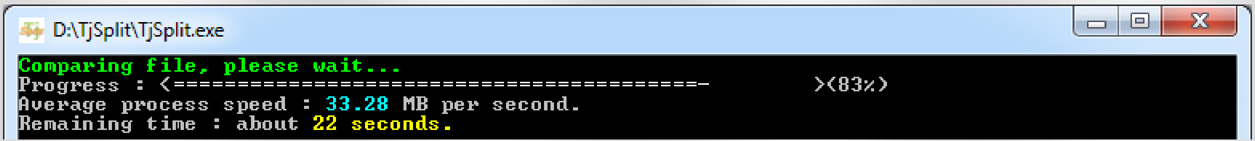
TjSplit provides automatic mode and manual mode for joining data. In automatic mode you just need to input filename with extension .001. For example: you input the file name TjSplit.txt, then the program will automatically search for the file TjSplit.txt.001, if any, the program will search for TjSplit.txt.002, etc., and name the output file will be named TjSplit. txt (corresponding to input a name, but without extension *.001). In manual mode, you will be asked how the amount of data to be joined, and then you input file name for data that will be merged. And of course, you also input file name for output file in this manual mode. If the program detects the same file name with the output file name, then TjSplit asks whether this file should be overwritten or not.

3) Compare

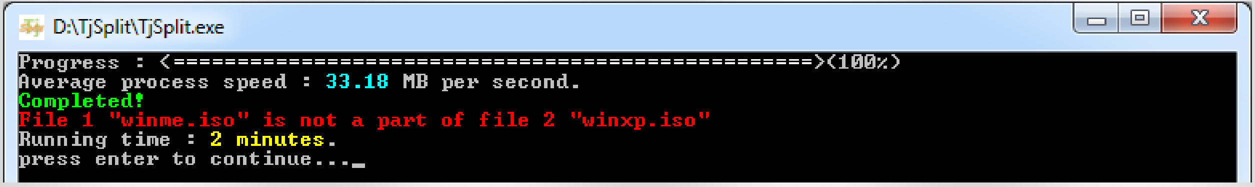


```
  /$$$$$$                                                                   
 /$$__  $$                                                                  
| $$  \__/  /$$$$$$  /$$$$$$/$$$$   /$$$$$$   /$$$$$$   /$$$$$$   /$$$$$$ 
| $$       /$$__  $$| $$_  $$_  $$ /$$__  $$ |____  $$ /$$__  $$ /$$__  $$
| $$      | $$  \ $$| $$ \ $$ \ $$| $$  \ $$  /$$$$$$$| $$  \__/| $$$$$$$$
| $$    $$| $$  | $$| $$ | $$ | $$| $$  | $$ /$$__  $$| $$      | $$_____/
|  $$$$$$/|  $$$$$$/| $$ | $$ | $$| $$$$$$$/|  $$$$$$$| $$      |  $$$$$$$
 \______/  \______/ |__/ |__/ |__/| $$____/  \_______/|__/       \_______/
                                  | $$                                    
                                  | $$                                    
                                  |__/                                    
Compare Options :
1) Checks is both of this file are exactly same (equal)
2) Checks is this file is a part of another file (partition)
Choice : 2
input path and filename for file 1 : winme.iso
input path and filename for file 2 : winxp.iso
```

In this mode there are two modes as described in section TjSplit v0.1 features of this manual book, this feature is to compare two data directly. There are two modes of comparison. To check for equality, and check the parts of other files. You only need to select the mode and then enter the two file names to be compared. Wait a while and then the results will be appeared.

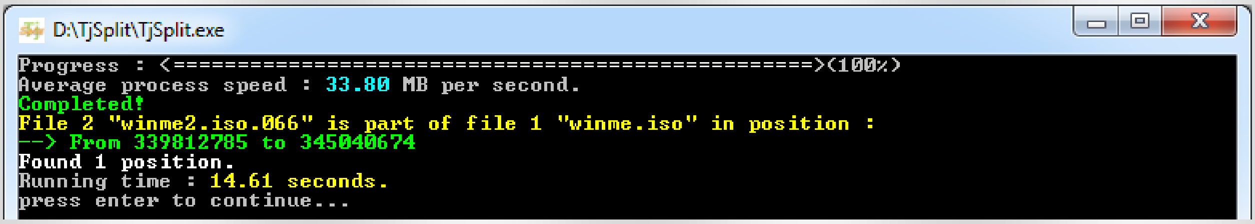


```
Comparing file, please wait...
Progress : <========================================-         ><83%>
Average process speed : 33.28 MB per second.
Remaining time : about 22 seconds.
```



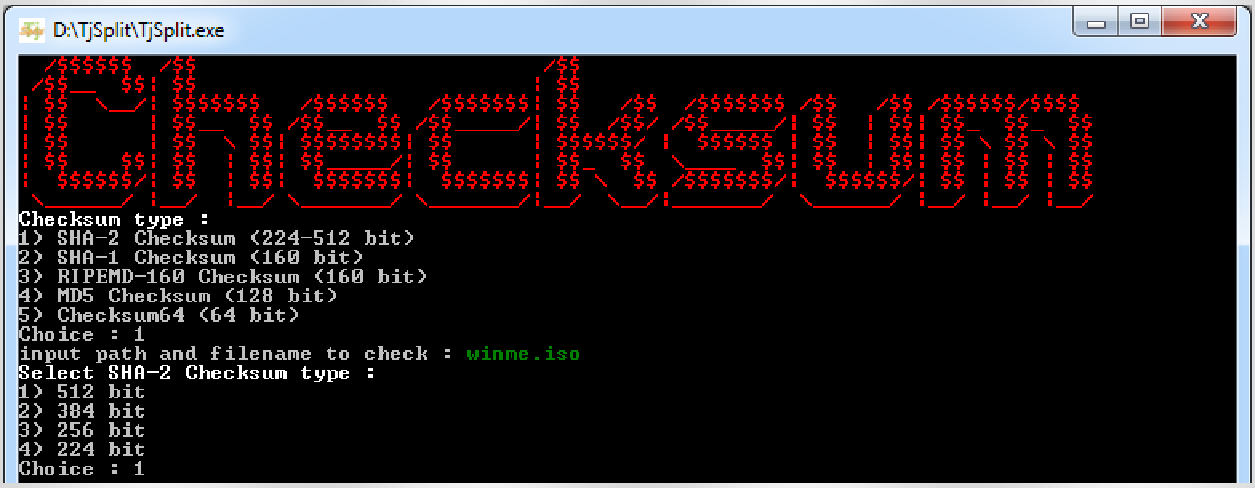
```
Progress : <==================================================><100%>
Average process speed : 33.18 MB per second.
Completed!
File 1 "winme.iso" is not a part of file 2 "winxp.iso"
Running time : 2 minutes.
press enter to continue..._
```

If the file is detected is part of another file, then TjSplit displays like this:



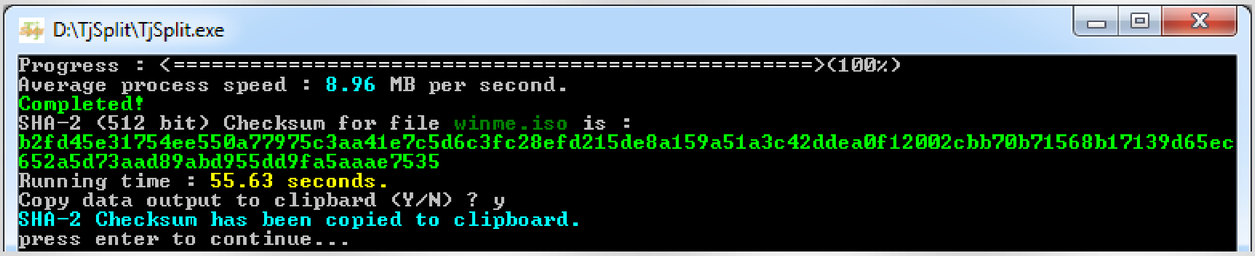
```
Progress : <==================================================><100%>
Average process speed : 33.80 MB per second.
Completed!
File 2 "winme2.iso.066" is part of file 1 "winme.iso" in position :
--> From 339812785 to 345040674
Found 1 position.
Running time : 14.61 seconds.
press enter to continue...
```

4) Checksum



```
Checksum type :
1) SHA-2 Checksum (224-512 bit)
2) SHA-1 Checksum (160 bit)
3) RIPEMD-160 Checksum (160 bit)
4) MD5 Checksum (128 bit)
5) Checksum64 (64 bit)
Choice : 1
input path and filename to check : winme.iso
Select SHA-2 Checksum type :
1) 512 bit
2) 384 bit
3) 256 bit
4) 224 bit
Choice : 1
```

There are 8 types of checksum that is supported by TjSplit v0.1 you just select checksum type and input file name to check, then the results will appear immediately.

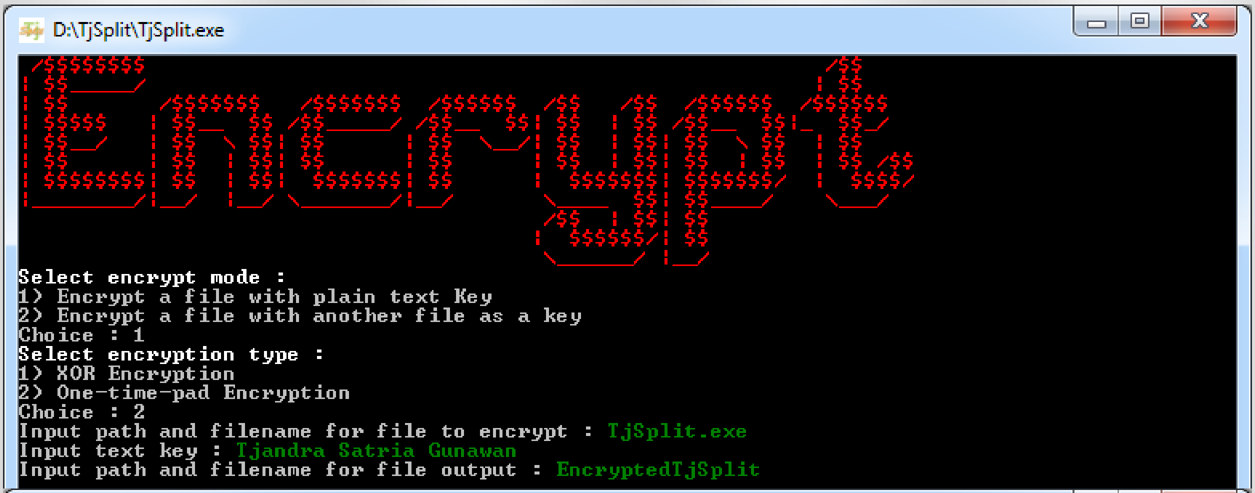


```
Progress : <==================================================>(100%)
Average process speed : 8.96 MB per second.
Completed!
SHA-2 (512 bit) Checksum for file winme.iso is :
b2fd45e31754ee550a77975c3aa41e7c5d6c3fc28efd215de8a159a51a3c42ddea0f12002cbb70b71568b17139d65ec
652a5d73aad89abd955dd9fa5aaae7535
Running time : 55.63 seconds.
Copy data output to clipbard (Y/N) ? y
SHA-2 Checksum has been copied to clipboard.
press enter to continue...
```

A description of what the checksum is described in section TjSplit v0.1 Features in this manual book.

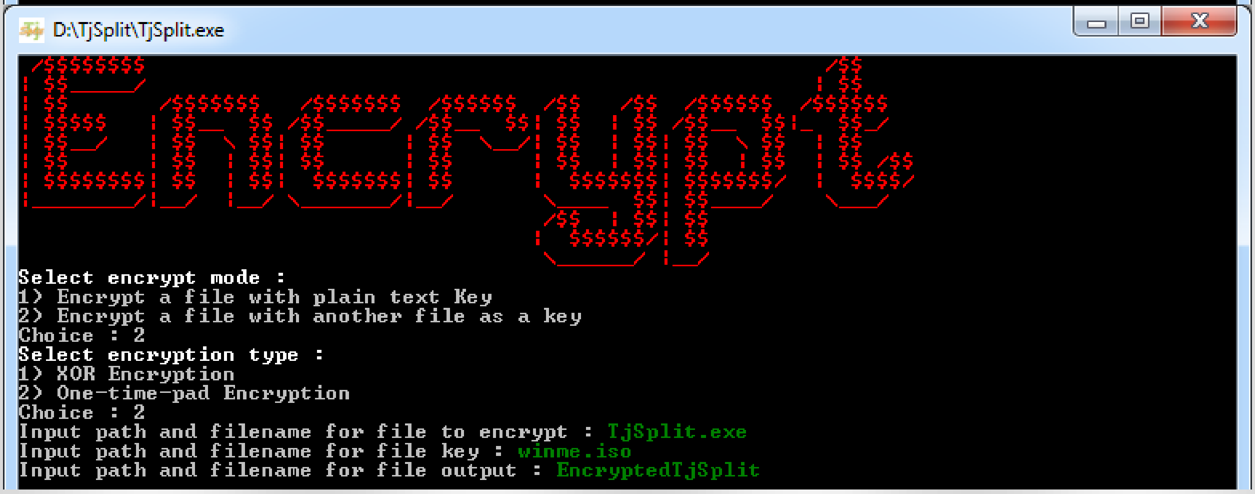
5) Encrypt

There are two modes of encryption that is supported by TjSplit : encryption with a text key or file key. The key that more secure is a key file, because this key can achieve MB / millions of bytes, but the weakness of this mode is if you want to open a locked file, you first must have a key file to decrypt file, whereas this does not happen on the text key because it can be memorized. There are two types of encryption that supported by TjSplit v0.1 : the XOR Encryption and One-Time-Pad Encryption.



D:\TjSplit\TjSplit.exe

```
 /$$$$$$$$                                                     /$$
| $$_____/                                                    | $$
| $$       /$$$$$$$   /$$$$$$$  /$$$$$$  /$$   /$$  /$$$$$$  /$$$$$$
| $$$$$   | $$__  $$ /$$_____/ /$$__  $$| $$  | $$ /$$__  $$|_  $$_/
| $$__/   | $$  \ $$| $$      | $$  \__/| $$  | $$| $$  \ $$  | $$
| $$      | $$  | $$| $$      | $$      | $$  | $$| $$  | $$  | $$ /$$
| $$$$$$$$| $$  | $$|  $$$$$$$| $$      |  $$$$$$$| $$$$$$$/  |  $$$$/
|________/|__/  |__/ \_______/|__/       \____  $$| $$____/    \___/
                                         /$$  | $$| $$
                                        |  $$$$$$/| $$
                                         \______/ |__/
Select encrypt mode :
1) Encrypt a file with plain text Key
2) Encrypt a file with another file as a key
Choice : 1
Select encryption type :
1) XOR Encryption
2) One-time-pad Encryption
Choice : 2
Input path and filename for file to encrypt : TjSplit.exe
Input text key : Tjandra Satria Gunawan
Input path and filename for file output : EncryptedTjSplit
```



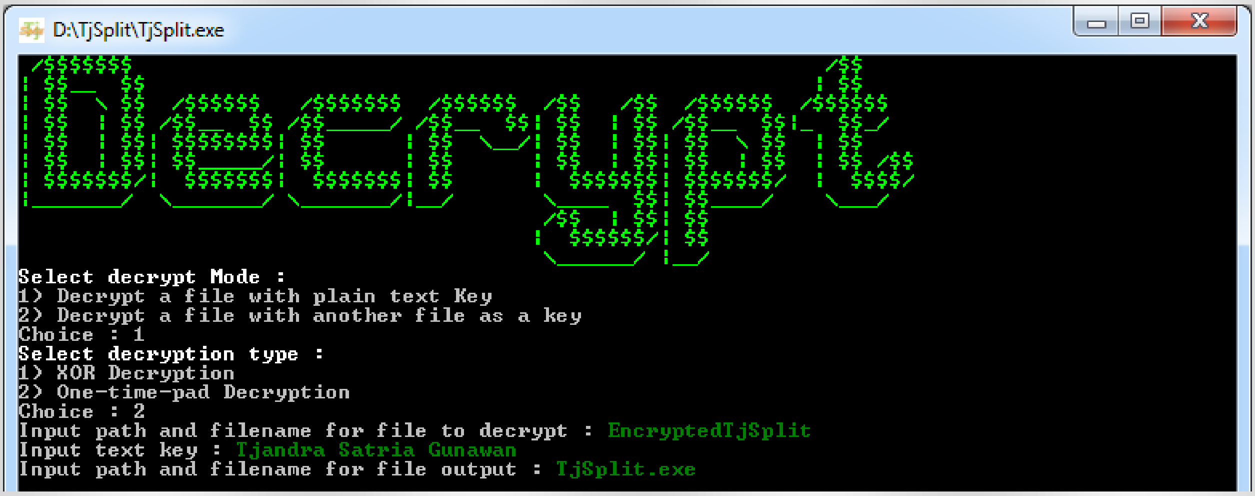
D:\TjSplit\TjSplit.exe

```
 /$$$$$$$$                                                     /$$
| $$_____/                                                    | $$
| $$       /$$$$$$$   /$$$$$$$  /$$$$$$  /$$   /$$  /$$$$$$  /$$$$$$
| $$$$$   | $$__  $$ /$$_____/ /$$__  $$| $$  | $$ /$$__  $$|_  $$_/
| $$__/   | $$  \ $$| $$      | $$  \__/| $$  | $$| $$  \ $$  | $$
| $$      | $$  | $$| $$      | $$      | $$  | $$| $$  | $$  | $$ /$$
| $$$$$$$$| $$  | $$|  $$$$$$$| $$      |  $$$$$$$| $$$$$$$/  |  $$$$/
|________/|__/  |__/ \_______/|__/       \____  $$| $$____/    \___/
                                         /$$  | $$| $$
                                        |  $$$$$$/| $$
                                         \______/ |__/
Select encrypt mode :
1) Encrypt a file with plain text Key
2) Encrypt a file with another file as a key
Choice : 2
Select encryption type :
1) XOR Encryption
2) One-time-pad Encryption
Choice : 2
Input path and filename for file to encrypt : TjSplit.exe
Input path and filename for file key : winme.iso
Input path and filename for file output : EncryptedTjSplit
```

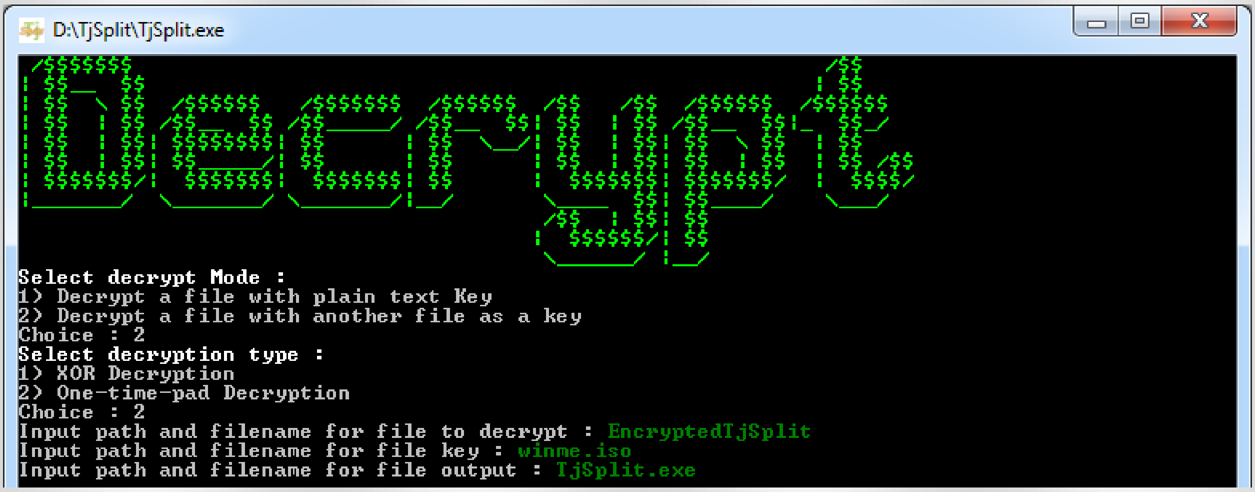
Both types of encryption XOR and One-Time-Pad encryption is a simple but very powerful, encrypted file will not be opened if the key is not correct. Although this encryption is not as well as AES, RSA, DES, Rijndael. But this encryption is already very good and can NEVER be attacked, because the key length can be up to the size of the GigaByte.

6) Decrypt

Decryption is the inverse process of encryption that will return the encrypted data back to the original data if the keys are used properly.



```
Select decrypt Mode :
1) Decrypt a file with plain text Key
2) Decrypt a file with another file as a key
Choice : 1
Select decryption type :
1) XOR Decryption
2) One-time-pad Decryption
Choice : 2
Input path and filename for file to decrypt : EncryptedTjSplit
Input text key : Tjandra Satria Gunawan
Input path and filename for file output : TjSplit.exe
```



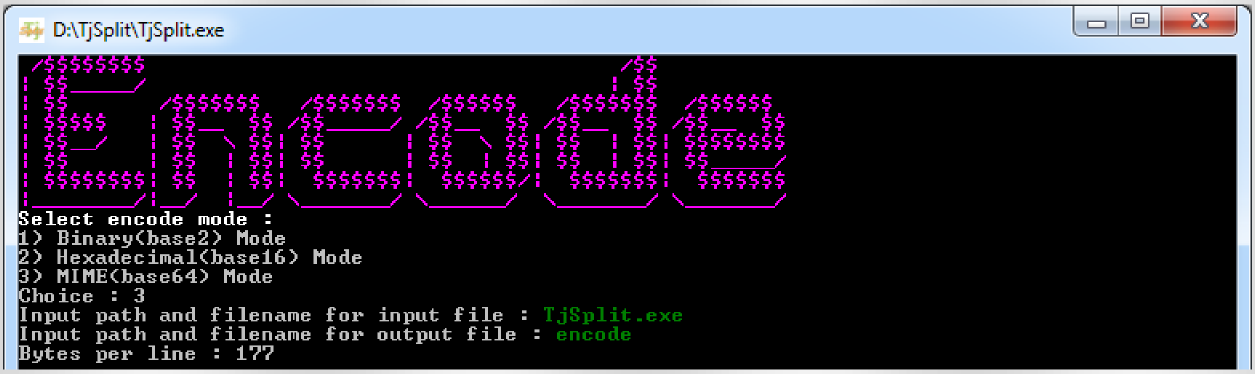
```
Select decrypt Mode :
1) Decrypt a file with plain text Key
2) Decrypt a file with another file as a key
Choice : 2
Select decryption type :
1) XOR Decryption
2) One-time-pad Decryption
Choice : 2
Input path and filename for file to decrypt : EncryptedTjSplit
Input path and filename for file key : winme.iso
Input path and filename for file output : TjSplit.exe
```

To decrypt a file using TjSplit v0.1 is same as to encrypt daya, just select decrypt mode then select the type of decryption, and then enter the name of file input, input text key or file name as a key to decrypt data, and input the name of the output file.

Crypto process is faster if key is text. However, although more slowly but file key is much more secure, because the key is not only based on a character formation, but in all possible binary formation.

7) Encode

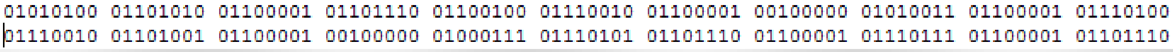
Encoding process is a process of converting from a data file into a text file that is readable by a text editor such as Notepad, WordPad, etc.. This code can be back into the original data with the decoding process. TjSplit v0.1 supports three encoding mode : binary, hexadecimal, and MIME, each has a different base. Typically the size of data that has been encoded is increased. Text is written in binary would be 9 times larger than the actual data size, hex 3 times, and MIME (4/3 = 1.3) times. All output file format in this encode process will have extension *. Txt.



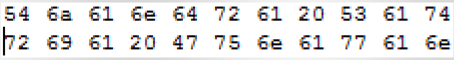
```
Select encode mode :
1) Binary(base2) Mode
2) Hexadecimal(base16) Mode
3) MIME(base64) Mode
Choice : 3
Input path and filename for input file : TjSplit.exe
Input path and filename for output file : encode
Bytes per line : 177
```

For encoding the data: first, select the encoding mode, then enter the file name as the input and enter output file name. Then specify how many bytes per line, for example, if 177 bytes per line, means in a line there will be 177 group / character, then go to the next line, and so on. Here is an example of the encoding of the word "TjandraSatria Gunawan" with 11 Byte in a row :

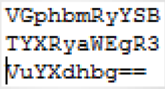
The word "Tjandra Satria Gunawan" in the encoded in binary, hexadecimal, and MIME with 11 Byte per line.

Binary : 

```
01010100 01101010 01100001 01101110 01100100 01110010 01100001 00100000 01010011 01100001 01110100
01110010 01101001 01100001 00100000 01000111 01110101 01101110 01100001 01110111 01100001 01101110
```

Hexadecimal : 

```
54 6a 61 6e 64 72 61 20 53 61 74
72 69 61 20 47 75 6e 61 77 61 6e
```

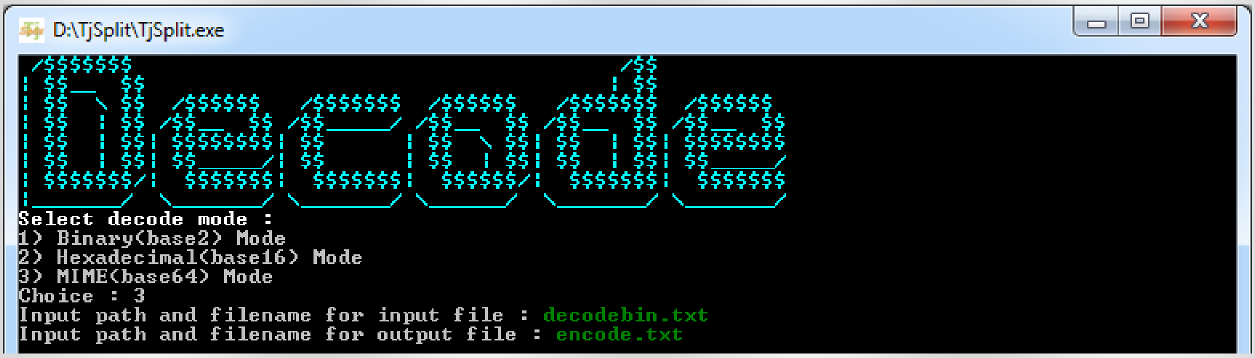
MIME : 

```
VGphbmRyYSB
TYXRyaWEgR3
VuYXdhbg==
```

Not only the text that can be encoded, but any data, and can be decoded back into the original data.

8) Decode

Decoding process is the inverse of Encoding process. This process is to change encoded data back to the original data.



```
 /$$$$$$$                                      /$$
| $$__  $$                                    | $$
| $$  \ $$  /$$$$$$   /$$$$$$$  /$$$$$$   /$$$$$$$  /$$$$$$
| $$  | $$ /$$__  $$ /$$_____/ /$$__  $$ /$$__  $$ /$$__  $$
| $$  | $$| $$$$$$$$| $$      | $$  \ $$| $$  | $$| $$$$$$$$
| $$  | $$| $$_____/| $$      | $$  | $$| $$  | $$| $$_____/
| $$$$$$$/|  $$$$$$$|  $$$$$$$|  $$$$$$/|  $$$$$$$|  $$$$$$$
|_______/  \_______/ \_______/ \______/  \_______/ \_______/
Select decode mode :
1) Binary(base2) Mode
2) Hexadecimal(base16) Mode
3) MIME(base64) Mode
Choice : 3
Input path and filename for input file : decodebin.txt
Input path and filename for output file : encode.txt
```

In the decoding process, you are not asked to enter how many bytes per line because it will be detected automatically. The process of decoding the TjSplit v0.1 is faster than the process of encoding because output file size will shrink to the real binary data.