

## qDecoder On-line Reference

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- 

qDecoder                      <http://www.qDecoder.org>    <ftp://ftp.qDecoder.org/pub/qDecoder/>

qDecoder                      tar                      compress

```
$ uncompress qDecoder-VERSION.tar.Z
$ tar xvf qDecoder-VERSION.tar
```

GNU Tar가

```
$ tar xvfZ qDecoder-VERSION.tar.Z
```

qDecoder-VERSION

가

가

.

```
$ cd qDecoder-VERSION
$ ls -asCF
total 289
 1 ./              3 Makefile.in          1 examples/
 1 ../            48 README              6 install-sh*
 1 AUTHORS        128 README.pdf          2 qDecoder.jpg
 8 CHANGES       55 configure*           1 rfc/
26 COPYING        3 configure.in          1 src/
 2 DISCLAIMER     1 contrib/              1 win32/
```

```
AUTHORS -
CHANGES -
COPYING -
DISCLAIMER -
README -
README.pdf -      PDF      README
configure -
configure.in - Autoconf
contrib/... -
examples/... -
install-sh - Autoconf
qDecoder.jpg -
rfc/... - RFC
src/... - qDecoder
win32/... - Microsoft Visual C++
```

qDecoder  
(6.0.1 )

GNU

Free/Open Source

Autoconf

configure make  
가

, configure  
가

Makefile

,

```
$ cd qDecoder-VERSION

$ ./configure
creating cache ./config.cache
checking for gcc... gcc
checking whether the C compiler (gcc ) works... yes
checking whether the C compiler (gcc ) is a cross-compiler... no
...( )...
creating Makefile
creating src/Makefile
creating examples/Makefile
creating contrib/qValue-1.0.1/Makefile
creating contrib/qcValue-1.0/Makefile
```

```
$ ls -asCF (Makefile )
total 221
 1 ./              44 README              1 contrib/
 1 ../            60 README.pdf          1 examples/
 1 AUTHORS        2 config.cache         6 install-sh*
26 COPYING        2 config.log           2 qDecoder.jpg
 2 DISCLAIMER     6 config.status*       1 rfc/
 3 Makefile       55 configure*           1 src/
 3 Makefile.in    3 configure.in
```

```
$ make
==> src
gcc -g -O2 -DSTDC_HEADERS=1 -DHAVE_CTYPE_H=1 -DHAVE_TIME_H=1 -DHAVE_SYS_STAT_H=1
-DHAVE_SYS_TYPES_H=1 -DHAVE_STRFTIME=1 -DHAVE_VPRINTF=1 -DHAVE_STRDUP=1 -DHAVE
STRSTR=1 -I. -c -o qDecoder.o qDecoder.c
...( )...
/bin/rm -f libqDecoder.so
```

```
ln -s libqDecoder.so.1 libqDecoder.so
<=== src
===> examples
gcc -g -O2 -DSTDC_HEADERS=1 -DHAVE_CTYPE_H=1 -DHAVE_TIME_H=1 -DHAVE_SYS_STAT_H=1
-DHAVE_SYS_TYPES_H=1 -DHAVE_STRFTIME=1 -DHAVE_VPRINTF=1 -DHAVE_STRDUP=1 -DHAVE
STRSTR=1 -I. -I../src -c -o fetch.o fetch.c
...( )...
gcc -g -O2 -DSTDC_HEADERS=1 -DHAVE_CTYPE_H=1 -DHAVE_TIME_H=1 -DHAVE_SYS_STAT_H=1
-DHAVE_SYS_TYPES_H=1 -DHAVE_STRFTIME=1 -DHAVE_VPRINTF=1 -DHAVE_STRDUP=1 -DHAVE
STRSTR=1 -I. -I../src -o arglist.cgi arglist.o ../src/libqDecoder.a
<=== examples
...( )...
```

```
)
가 ``make"가 PATH 가 make
가 /usr/ccs/bin/" PATH 가 .
```

```
)
``make clean" . ``make clean" configure Makefile
, ``make reset"
```

```
``make install" . ``make install"
, configure --prefix, --libdir, --includedir
configure
/usr/local/lib, /usr/local/include 가 ,
```

```
${prefix} ==> /usr/local ( )
${libdir} ==> ${prefix}/lib ( )
${includedir} ==> ${prefix}/include ( )
```

```
libqDecoder.a ==> ${libdir}/libqDecoder.a
libqDecoder.so.[n] ==> ${libdir}/libqDecoder.so.[n]
libqDecoder.so ==> ${libdir}/libqDecoder.so
qDecoder.h ==> ${includedir}/include/qDecoder.h
```

```
ex) $ ./configure --prefix=/usr
ex) $ ./configure --libdir=/home/nobreak/mylib --includedir=/home/nobreak/myinc
```

```
) libqDecoder.so libqDecoder.so.[n] 가
n 1 가 6.0.1
libqDecoder.so.1 qDecoder 7.0, 8.0 가 ,
libqDecoder.so.1
```

```
$ cd qDecoder-VERSION
```

```
$ make install
ln -s libqDecoder.so.1 libqDecoder.so
/usr/bin/install -c -m 444 qDecoder.h /usr/local/include/qDecoder.h
/usr/bin/install -c -m 444 libqDecoder.a /usr/local/lib/libqDecoder.a
/usr/bin/install -c -m 444 libqDecoder.so.1 /usr/local/lib/libqDecoder.so.1
/bin/rm -f /usr/local/lib/libqDecoder.so
ln -s /usr/local/lib/libqDecoder.so.1 /usr/local/lib/libqDecoder.so
```

```
) root .
```

```
qDecoder ``make deinstall"
```

```
$ make deinstall
/bin/rm -f /usr/local/include/qDecoder.h
/bin/rm -f /usr/local/lib/libqDecoder.a
/bin/rm -f /usr/local/lib/libqDecoder.so.1
```

```
/bin/rm -f /usr/local/lib/libqDecoder.so
```

examples

```
Makefile      examples.html      ,      ,      ,
(libqDecoder.a)      ,      (libqDecoder.so)
      examples/Makefile      ``QLIB
= ../src/libqDecoder.a" ``QLIB = ../src/libqDecoder.so"      examples      ``make
clean all"      . (Makefile      examples
      . ``make clean all QLIB=../src/libqDecoder.so")
```

```
$ make clean all QLIB=../src/libqDecoder.a (
$ ls -al *.cgi
-rwxr-xr-x 1 root power 61876 6 2 22:32 arglist.cgi
-rwxr-xr-x 1 root power 61210 6 2 22:32 fetch.cgi
-rwxr-xr-x 1 root power 61331 6 2 22:32 multivalue.cgi
-rwxr-xr-x 1 root power 61551 6 2 22:32 streamedit.cgi
-rwsr-sr-x 1 root power 61639 6 2 22:32 upload.cgi

$ make clean all QLIB=../src/libqDecoder.so (
$ ls -al *.cgi
-rwxr-xr-x 1 root power 12682 6 2 22:33 arglist.cgi
-rwxr-xr-x 1 root power 11560 6 2 22:33 fetch.cgi
-rwxr-xr-x 1 root power 11852 6 2 22:33 multivalue.cgi
-rwxr-xr-x 1 root power 12052 6 2 22:33 streamedit.cgi
-rwsr-sr-x 1 root power 12393 6 2 22:33 upload.cgi
```

## Microsoft Visual C++

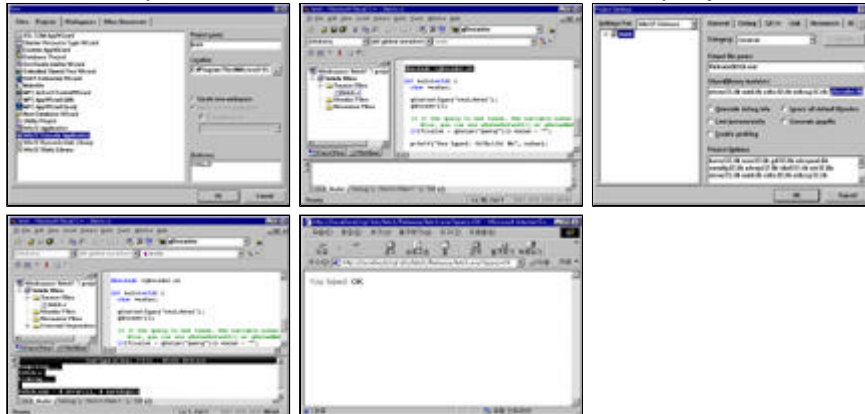
qDecoder , NT 가  
Windows 가 Microsoft Visual C++ (6.0.2) 가

1. :
2. : ( : WinZip)
3. :
  1. ``File -> Open Workspace" win32/qDecoder.dsw
  2. ``Build -> Build qDecoder.lib"

```
----Configuration: qDecoder - Win32 Release----
Compiling...
qDecoder.c
Creating library...

qDecoder.lib - 0 error(s), 0 warning(s)
```
4. : src/qDecoder.h win32/Release/qDecoder.lib  
Visual C++ , ( 가 )  
) C: \ Program Files \ Microsoft Visual Studio \ VC98 \ Lib \ qDecoder.lib  
) C: \ Program Files \ Microsoft Visual Studio \ VC98 \ Include \ qDecoder.h
5. :
  1. #include <qDecoder.h> #include "...PATH... \ qDecoder.h"
  2. "Project -> Setting -> Link -> Object/library modules" qDecoder.lib 가 . ( )
6. :
  1. ``File -> New -> Win32 Console Application"

2. ``FileView -> Source Files -> Add Files to Folder" examples/fetch.c
3. ``Project -> Setting -> Link -> Object/library modules" qDecoder.lib 가
4. ``Build -> Build PRJ\_NAME.exe"
5. (IIS) CGI 가 PRJ\_NAME.exe  
 . http://localhost/...PATH.../PRJ\_NAME.exe?query=OK



## qContentType()

Syntax: void qContentType(char \*mimetype);

Function: MimeType

Return:

Note:

Example:

```
qContentType("text/html"); // HTML
qContentType("image/gif"); // GIF
```

## qPrintf()

Syntax: int qPrintf(int mode, char \*format, ...);

Function: printf() HTML TAG

Return: bytes , EOF Link

Note: 가 10K(1024 \* 10 - 1)

Example:

```
Mode 0 : printf() , HTML
Mode 1 : HTML TAG . Link
Mode 2 : Mode 1 + link
Mode 3 : Mode 2 + link (target=_top)
Mode 4 : HTML TAG
Mode 5 : Mode 4 + Link
Mode 6 : Mode 5 + link (target=_top)
Mode 10 : Mode 0 + Convert
Mode 11 : Print HTML TAG + Convert
Mode 12 : Mode 11 + Auto Link
Mode 13 : Mode 12 + Auto Link to _top frame
Mode 14 : Waste HTML TAG + Convert
Mode 15 : Mode 14 + Auto Link
Mode 16 : Mode 15 + Auto Link to _top frame

Convert : " " -> " "
          " " -> " &nbsp;"
          " " -> " &nbsp;&nbsp;"
          "\r" ->
```

```
"\n" -> "<br>\n"
```

```
10      Mode          <pre>
```

```
qPrintf(i, "Mode %d: <font>\\"http://www.hongik.com\\"</font>\n", i);
```

```
Mode 0: <font>"http://www.hongik.com"</font>
```

```
Mode 1: &lt;font&gt;&quot;http://www.hongik.com&quot;&lt;/font&gt;
```

```
Mode 2: &lt;font&gt;&quot;<a href=\"http://www.hongik.com\" target=\"\">http://www
```

```
Mode 3: &lt;font&gt;&quot;<a href=\"http://www.hongik.com\" target=\"_top\">http://
```

```
Mode 4: &quot;http://www.hongik.com&quot;
```

```
Mode 5: &quot;<a href=\"http://www.hongik.com\" target=\"\">http://www.hongik.com<
```

```
Mode 6: &quot;<a href=\"http://www.hongik.com\" target=\"_top\">http://www.hongik.
```

```
Mode 10: <font>"http://www.hongik.com"</font><br>
```

```
Mode 11: &lt;font&gt;&quot;http://www.hongik.com&quot;&lt;/font&gt;<br>
```

```
Mode 12: &lt;font&gt;&quot;<a href=\"http://www.hongik.com\" target=\"\">http://ww
```

```
Mode 13: &lt;font&gt;&quot;<a href=\"http://www.hongik.com\" target=\"_top\">http:
```

```
Mode 14: &quot;http://www.hongik.com&quot;<br>
```

```
Mode 15: &quot;<a href=\"http://www.hongik.com\" target=\"\">http://www.hongik.com
```

```
Mode 16: &quot;<a href=\"http://www.hongik.com\" target=\"_top\">http://www.hongik
```

```
qPrintf(i, "Mode %d: ' ', ' ', ' ', ' ', '\n", i);
```

```
Mode 0: ' ', ' ', ' ', ' ', ' ', ' '
```

```
Mode 1: ' ', ' ', ' ', ' ', ' ', ' '
```

```
Mode 2: ' ', ' ', ' ', ' ', ' ', ' '
```

```
Mode 3: ' ', ' ', ' ', ' ', ' ', ' '
```

```
Mode 4: ' ', ' ', ' ', ' ', ' ', ' '
```

```
Mode 5: ' ', ' ', ' ', ' ', ' ', ' '
```

```
Mode 6: ' ', ' ', ' ', ' ', ' ', ' '
```

```
Mode 10: ' ', ' ', '&nbsp;', ' ', '&nbsp;&nbsp;&nbsp;', ' ', '&nbsp;&nbsp;&nbsp;'<br>
```

```
Mode 11: ' ', ' ', '&nbsp;', ' ', '&nbsp;&nbsp;&nbsp;', ' ', '&nbsp;&nbsp;&nbsp;'<br>
```

```
Mode 12: ' ', ' ', '&nbsp;', ' ', '&nbsp;&nbsp;&nbsp;', ' ', '&nbsp;&nbsp;&nbsp;'<br>
```

```
Mode 13: ' ', ' ', '&nbsp;', ' ', '&nbsp;&nbsp;&nbsp;', ' ', '&nbsp;&nbsp;&nbsp;'<br>
```

```
Mode 14: ' ', ' ', '&nbsp;', ' ', '&nbsp;&nbsp;&nbsp;', ' ', '&nbsp;&nbsp;&nbsp;'<br>
```

```
Mode 15: ' ', ' ', '&nbsp;', ' ', '&nbsp;&nbsp;&nbsp;', ' ', '&nbsp;&nbsp;&nbsp;'<br>
```

```
Mode 16: ' ', ' ', '&nbsp;', ' ', '&nbsp;&nbsp;&nbsp;', ' ', '&nbsp;&nbsp;&nbsp;'<br>
```

qPuts()

Syntax: void qPuts(int mode, char \*buf);

Function: `qPuts()` (ex: `str = " ";`) `qPuts()` `buf`

`qPuts()` `qPuts()` `strdup()`

Note: `qPuts(mode, " ");`

Example:

```
char buf[100];
strcpy(buf, "http://www.hongik.com mailto:nobreak@hongik.com");
qPuts(2, buf);

char *buf;
buf = strdup("http://www.hongik.com mailto:nobreak@hongik.com");
qPuts(2, buf);
free(buf);
```

## qError()

Syntax: void qError(char \*format, ...):

Function: Message . printf()  
Note: 1024-1 byte

Example:

```
qError( "      " );  
qError( "%s      ", buf );
```

---

## qErrorLog()

Syntax: void qErrorLog(char \*filename);

Function: qError()

Note: , qErrorLog("logs/error.log")  
qError()가 , 'logs/error.log' 가

Example:

```
qErrorLog( "      " );          // enable log  
qErrorLog(NULL);                // disable log (default)
```

---

## qErrorContact()

Syntax: void qErrorContact(char \*msg);

Function: qError()

Return:

Note:

Example:

```
qErrorContact( "- Author" );  
qErrorContact(NULL);          // disable (default)
```

---

## qRedirect()

Syntax: void qRedirect(char \*url);

Function: HTTP Location:

Note: qRedirect HTTP qConteneType() ,

Example:

```
qRedirect( "http://www.hongik.com/" );
```

---

## qDecoder()

Syntax: int qDecoder(void);

Function: Query String Linked List

Return: , -1

Example:

```
int num;  
num = qDecoder();
```

- application/x-www-form-urlencoded (%xx )



- multipart/form-data (File Uploading )

Example 1: application/x-www-form-urlencoded

[HTML]	[ ]	URL Encoding , [C]
--------	-----	-----------------------

```

[HTML]
<form method="post" action="input.cgi">
    <input type="text" name="userID"><br>
    <input type="submit">
</form>

[ ]
name = "userID"
value = "가"

[C]
#include <stdio.h>
#include "qDecoder.h"
void main(void) {
    char *id;
    qContentType("text/html");
    id = qValue("userID");
    printf("%s", id);
}

```

Example 2: multipart/form-data

PC	'a.gif'	128byte	[HTML]	[C]
----	---------	---------	--------	-----

```

[HTML]
<form method="post" action="upload.cgi" enctype="multipart/form-data">
    <input type="text" name="userID"><br>
    <input type="file" name="binary"><br>
    <input type="submit">
</form>

[ ]
name = "userID"
value = "가"

name = "binary"
value = "a.gif 2"
name = "binary.length"
value = "128"
name = "binary.filename"
value = "a.gif"

[C]
#include <stdio.h>
#include <stdlib.h>
#include "qDecoder.h"

void main(void) {
    FILE *fp;
    char *userID;
    char *filedata, *filename;
    int filelength, i;

    qContentType("text/plain");

    userID = qValue("userID");

    filedata = qValue("binary");
}

```

```

        filelength = qiValue("binary.length");
        filename    = qValue("binary.filename");

        fp = fopen(filename, "wb");
        for(i = filelength; i > 0; i--) fprintf(fp, "%c", *(filedata++));
        fclose(fp);

        printf("%s : %s(%s bytes) saved.", userID, filename, filelength);
    }

```

```

HTML      type=text      . type=file      '      .length'      '
      .name'      가      .      .length'      가      ,
      ,      .name'      가      ,      가      PC
      ,      type=text      ,      가      type=file      3
("C: \ Data \ a.gif"      "a.gif"      )      1
      가      1      1
      qPrint()

```

## qValue()

Syntax: char \*qValue(char \*format, ...);

Function: Linked List ( ) . qDecoder()가

Return: qDecoder . NULL

Note: qValue() qDecoder() free() qFree() ( qValue

)

Example:

```

char *test;
test = qValue(" ");

char *test;
int i = 1;
test = qValue("COUNT.%d", i);

```

## qiValue()

Syntax: int qiValue(char \*format, ...);

Function: qValue() , ( )

Return: ( ) 가 0

Example:

```

int test;
test = qiValue(" ");

int test, i = 1;
test = qiValue("COUNT.%d", i);

```

## qValueDefault()

Syntax: char \*qValueDefault(char \*defstr, char \*format, ...);

Function: 가 qValue()

Return: qValue() NULL defstr

Example:

```

value = qValueDefault(" ", "COUNTRY");

```

---

## qValueNotEmpty()

Syntax: char \*qValueNotEmpty(char \*errmsg, char \*format, ...);

Function: 가 ("") qError()

Return: NULL 가 qValue()

Example:

```
value = qValueNotEmpty(" ", "COUNTRY");
```

---

## qValueFirst()

Syntax: char \*qValueFirst(char \*format, ...);

Function:

Return:

NULL.

Example:

```
qValueFirst("checklist");
```

---

## qValueNext()

Syntax: char \*qValueNext(void);

Function: qValueFirst()

Return: , NULL.

Example:

```
char *list;
for(list = qValueFirst("checklist"); list; list = qValueNext()) {
    printf("checklist = %s<br>\n", list);
}
```

---

## qGetFirstEntry()

Syntax: Q\_Entry \*qGetFirstEntry(void);

Function: Linked List Q\_Entry . qDecoder() Linked List

Example:

```
Q_Entry *first;
first = qGetFirstEntry();
```

---

## qPrint()

Syntax: void qPrint(void);

Function:

Example:

```
qPrint();
```

---

## qFree()

Syntax: void qFree(void);

Function: qDecoder()

Memory

Example:

```
qFree();
```

---

## (cookie)

## qSetCookie()

Syntax: void qSetCookie(char \*name, char \*value, int exp\_days, char \*path, char \*domain, char \*secure);

Function: name=value

Note: qContentType()

Example:

```
char *name = "NAME", *value = "Kim";

// NAME=Kim 30
qSetCookie(name, value, 30, NULL, NULL, NULL);

// NAME=Kim "ANYTHING.qdecoder.org" "/"
// 가
qSetCookie(name, value, 0, "/", ".qdecoder.org", NULL);
```

---

## qcDecoder()

Syntax: int qcDecoder(void);

Function: Linked List

Return: , -1

Note:

Example:

```
int num;
num = qcDecoder();
```

---

## qcValue()

Syntax: char \*qcValue(char \*format, ...);

Function: Linked List ( )

Return: , NULL.

Note: qcDecoder()가 , .

Example:

```
char *value;
value = qcValue(" ");
```

---

## qciValue()

Syntax: int qciValue(char \*format, ...);

Function: Linked List ( )

Return: ( ) . 가 0.  
Note: qcDecoder()가  
Example:

```
int value;  
value = qciValue(" ");
```

---

## qcPrint()

Syntax: void qcPrint(void);  
Function: .  
Example:

```
qcPrint();
```

---

## qcFree()

Syntax: void qcFree(void);  
Function: qcDecoder() Memory .  
Example:

```
qcFree();
```

---

## qURLencode()

Syntax: char \*qURLencode(char \*str);  
Function: URL Encoding .  
Return: URL Encoding . (free) 가 .  
Example:

```
char *encstr;  
encstr = qURLencode(" ? ");
```

---

## qURLdecode()

Syntax: char \*qURLdecode(char \*str);  
Function: %xx URL Encoding .  
Return: .  
Note: str .  
Example:

```
char *encstr;  
qURLdecode(encstr);
```

---

## qRemoveSpace()

Syntax: char \*qRemoveSpace(char \*str);  
Function: CR, LF .  
Return: , NULL.  
Note: qRemoveSpace(" "); .

Example:

```
char teststr[100];
strcpy(teststr, " Hello, world \r\n ");
qRemoveSpace(teststr); // teststr "Hello, world"가
```

---

## qStr09AZaz()

Syntax: int qStr09AZaz(char \*str);

Function: '0' - '9', 'A' - 'Z', 'a' - 'z'

Return: 1, 0

Note:

Example:

```
if(qStr09AZaz("abc1234") == 1) printf("True");
```

---

## qStrupr()

Syntax: char \*qStrupr(char \*str);

Function:

Return:

---

## qStristr()

Syntax: char \*qStristr(char \*big, char \*small);

Function: strstr()

Return: strstr()

---

## qStricmp()

Syntax: int qStricmp(char \*s1, char \*s2);

Function: strcmp()

Return: strcmp()

---

## qitocomma()

Syntax: char \*qitocomma(int value);

Function:

Return:

Note: static , qitocomma()가

Example:

```
printf("Price = %s", qitocomma(1234567));
Price = 1,234,567
```

---

## qArgMake()

(")

,

```

---- Example ----
Query Input: I am a "pretty girl"
-----
      | |
      V V
---- qArgMake() ----
qlist[0] = I
qlist[1] = am
qlist[2] = a
qlist[3] = pretty girl
qlist[4] = NULL
Return: 4 (4 Tokens)
-----
      | |
      V V
---- qArgPrint() ----
'I' (1 bytes)
'am' (2 bytes)
'a' (1 bytes)
'pretty girl' (11 bytes)
-----
      | |
      V V
---- qArgMatch() ----
Target String: Hi, I'm a pretty boy. Are you pretty girl?
               = = = = =
               0 0 2 2 3
Return: 3 (3 matches: qlist[0], qlist[2], qlist[3])
-----
      | |
      V V
---- qArgEmprint() ----
Target String.: Hi, I'm a pretty boy. Are you pretty girl?
Result.....: Hi, I'm a pretty boy. Are you pretty girl?
               = = = = =
               1 2 3 4 5
Return: 5 (5 matches)
-----

```

Syntax: int qArgMake(char \*str, char \*\*qlist);

Function:

Return:

Note: (")

Example:

```

char *query="I am a \"pretty girl\".", *qlist[MAX_TOKENS];
int queries;
queries = qArgMake(query, qlist);

```

## qArgMatch()

Syntax: int qArgMatch(char \*str, char \*\*qlist);

Function:

Return:

1 qArgMake() qArgEmprint()

Example:

```

int matches;
matches = qArgMatch("Hi, I'm a pretty boy. Are you pretty girl?", qlist);

```

## qArgEmprint()

Syntax: int qArgEmprint(int mode, char \*str, char \*\*qlist);

Function: (bold)

Return: , qArgMatch()

Note: mode qPrintf()

1

Example:

```
qArgEmprint(1, "Hi, I'm a pretty boy. Are you pretty girl?", qlist);
```

---

## qArgPrint()

Syntax: void qArgPrint(char \*\*qlist);

Function:

Example:

```
qArgPrint(qlist);
```

---

## qArgFree()

Syntax: void qArgFree(char \*\*qlist);

Function: qlist

Example:

```
qArgFree(qlist);
```

---

## qCheckFile()

Syntax: int qCheckFile(char \*filename);

Function:

Return: 1, 0.

Note: Permission 가

Example:

```
if(qCheckFile("test.dat") == 0) qError("File not found");
```

---

## qCatFile()

Syntax: int qCatFile(char \*filename);

Function:

Return: , -1

Note:

Example:

```
qContentType("image/gif");
qCatFile("mypic.gif");

qContentType("text/html");
```



```
qCatFile("myhtml.html");
```

---

## qReadFile()

Syntax: char \*qReadFile(char \*filename, int &size);

Function:

Return: , NULL.

Note: qReadFile 1 '\0' 가  
. spsize 가  
. spsize NULL .

Example:

```
char *sp, *sp2;  
int spsize;  
sp = qReadFile("filename", &spsize);  
sp2 = qReadFile("filename2", NULL);  
...  
free(sp), free(sp2);
```

---

## qSaveStr()

Syntax: int qSaveStr(char \*sp, int spsize, char \*filename, char \*mode);

Function:

Return: ( ), -1, -2  
Note: mode fopen mode . qSaveStr mode  
. umask()

Example:

```
char *sp = "To subscribe qDecoder mailing list\nSend mail to majordomo@hongik.  
int len;  
umask(0);  
len = qSaveStr(sp, strlen(sp), "Howto-mailing.txt", "wt", 0644);
```

---

## qfGetLine()

Syntax: char \*qfGetLine(FILE \*fp);

Function:

Return: , NULL.

Note: 가 .

Example:

```
line = qfGetLine(fp);
```

---

## qFileSize()

Syntax: long qFileSize(char \*filename);

Function: byte

Return: , -1

Note:

Example:

```
long size;  
size = qFileSize("/home/nobreak/sample.pdf");
```

---

## qfDecoder()

```
##                               Linked List
---- test.conf ----
# this is comment.
name  = Kim
phone = 123-4567
addr  =
-----
```

Syntax: Q\_Entry \*qfDecoder(char \*filename);

Function: Linked List . ( )

Return: Linked List , NULL.

Note: (#) .

Example:

```
Q_Entry *firstRecord;
firstRecord = qfDecoder("test.conf");
```

---

## qfValue()

Syntax: char \*qfValue(Q\_Entry \*first, char \*name);

Function: .

Return: , NULL.

Example:

```
char *value;
value = qfValue(FirstRecord, "name");
```

---

## qfiValue()

Syntax: int qfiValue(char \*format, ...);

Function: .

Return: ( ) . ,

가 0

Example:

```
int counter;
counter = qfiValue(FirstRecord, "counter");
```

---

## qfPrint()

Syntax: void qfPrint(Q\_Entry \*first);

Function: .

Example:

```
qfPrint(FirstRecord);
```

---

## qfFree()

Syntax: void qfFree(Q\_Entry \*first);

Function: Memory .  
Example:

```
qfFree(FirstRecord);
```

Linked List .

```
---- test.conf ----  
# this is comment.  
name = Seung-young Kim  
age = 26  
addr =  
-----
```

---

## qsDecoder()

Syntax: Q\_Entry \*qsDecoder(char \*str);  
Function: Linked List . ( )  
Return: Linked List , NULL.  
Note:  
Example:

```
Q_Entry *FirstRecord;  
char *str="name=Seung-young Kim\nage=26\naddr=" ;  
FirstRecord = qsDecoder(str);
```

---

## qsValue()

Syntax: char \*qsValue(Q\_Entry \*first, char \*name);  
Function: .  
Return: , NULL.  
Note:  
Example:

```
char *name;  
name = qsValue(FirstRecord, "name");
```

---

## qsiValue()

Syntax: int qsiValue(char \*format, ...);  
Function: .  
Return: ( ) . ,  
가 0.  
Note:  
Example:

```
int age;  
age = qsiValue(FirstRecord, "age");
```

---

## qsPrint()

Syntax: void qsPrint(Q\_Entry \*first);  
Function: .  
Example:

```
qsPrint(FirstRecord);
```

---

## qsFree()

Syntax: void qsFree(Q\_Entry \*first);

Function: Memory .

Return:

Note:

Example:

```
qsFree(FirstRecord);
```

---

## qReadCounter()

```
-----
```

```
---- number.dat ----
```

```
74
```

```
-----
```

Syntax: int qReadCounter(char \*filename);

Function: .

Return: , 0

Example:

```
int count;
count = qReadCounter("number.dat");
```

---

## qSaveCounter()

Syntax: int qSaveCounter(char \*filename, int number);

Function: ( ) .

Return: 1, 0

Example:

```
qSaveCounter("number.dat", 75);
```

---

## qUpdateCounter()

Syntax: int qUpdateCounter(char \*filename, int number);

Function: number 가 .

Return: + number, 0

Example:

```
int count;
count = qUpdateCounter("number.dat", -3);
```

---

## qAwkOpen()

```
## UNIX AWK .
---- ex) /etc/passwd ----
shpark:x:1008:1000:Sang-hyun Park:/home/shpark:/bin/csh
```

```
teamwork:x:1011:1000:Seung-young Kim:/home/teamwork:/bin/csh
kikuchi:x:1015:2000:KIKUCHI:/home/kikuchi:/bin/csh
-----
```

Syntax: int qAwkOpen(char \*filename, char separator);

Function:

Return: 1, 0

---

## qAwkNext()

Syntax: int qAwkNext(char array[][256]);

Function:

Return: -1

Note: 256

Example:

```
char array[7][256];
qAwkOpen("/etc/passwd", ':');
for( ; qAwkNext(array) > 0; ) printf("ID=%s, Name=%s", array[0], array[5]);
qAwkClose();
```

---

## qAwkClose()

Syntax: void qAwkClose(void);

Function:

---

## qSedFile()

```
## UNIX SED
---- ex) streamedit.html.in ----
Hi "${NAME}" <${EMAIL}>.
<p>You got a really cool hobby.
<br>I'm sure that your hobby, ${HOBBY},
can make your life more compatible.
-----
```

Syntax: int qSedFile(char \*filename, FILE \*fpout, char \*\*arg);

Function:

Return: 1, 0

Note: Unix Sed SSI

Example:

```
qSedFile
CGI
HTML
가
가
filename ( ) , fpout
"wt"
stdout
" + + + + + "
ex) char *arg[3 + 1] = { "s/${NAME}/Seung-young Kim/",
                        "s%${EMAIL}%nobreak@hongik.com%",
                        "s:${HOBBY}:Playing with Ji-su Hwang:",
                        NULL };
```

```

        's' , (replacement)
1      ' / ' ' % '
가      ' # ' , ' A '
.      가 , 가
      가 , ${STING}

streamedit.html.in

ex) qSedFile("streamedit.html.in", stdout, arg);

Hi "Seung-young Kim" <nobreak@hongik.com>.
<p>You got a really cool hobby.
<br>I'm sure that your hobby, Playing with Ji-su Hwang,
can make your life more compatible.

SSI      . (      <!--#include file="FILEPATH"-->      )
      SSI      . (Cascading)

<!--#include file="streamedit.html.in"-->

      ) include      CGI가
      ,

arg      NULL      .

ex) qSedFile("streamedit.html.in", stdout, NULL);

```

---

## qSedStr()

Syntax: int qSedStr(char \*srcstr, FILE \*fpout, char \*\*arg);

Function: qSedFile() , .

Return: qSedFile()

Example:

```
qSedStr("Hi my name is ${NAME}.", stdout, arg);
```

---

## qGetTime()

Syntax: struct tm \*qGetTime(void);

Function: tm .

Return: tm

Note:

Example:

```
struct tm *mytime;
mytime = qGetTime();
```

---

## qGetGMTime()

Syntax: time\_t qGetGMTime(char \*gmt, time\_t plus\_sec);

Function: ' +plus\_sec' GMT .

Return: 1970/1/1(00:00:00) + plus\_sec

Note:

Example:

```
time_t plus_sec;
char gmt[0xff];
plus_sec = (time_t)300; /* 5 */
qGetGMTime(gmt, plus_sec);
printf("%s", gmt); // "Fri, 22-Aug-1997 15:11:30 GMT"
```

---

## qCheckEmail()

Syntax: int qCheckEmail(char \*email);

Function: E-mail

Return: 1, 0.

Note:

Example:

```
qCheckEmail("nobreak@hongik.com");
```

---

## qCheckURL()

Syntax: int qCheckURL(char \*url);

Function: URL

Return: 1, 0

Example:

```
qCheckURL("http://www.hongik.com");
```

---

## qGetEnv()

Syntax: char \*qGetEnv(char \*envname, char \*nullstr);

Function: getenv(), NULL

Example:

```
char *name;
name = qGetEnv("SCRIPT_NAME", "/cgi-bin/CrazyWWWBoard.cgi");
name = qGetEnv("SCRIPT_NAME", NULL);
```

---

## qCGIenv()

Syntax: void qCGIenv(Q\_CGIenv \*env);

Function: CGI

Example:

```
Q_CGIenv myenv;
qCGIenv(&myenv);

typedef struct Q_CGIenv Q_CGIenv;
struct Q_CGIenv{
    char *auth_type;
```

```

char *content_length;
char *content_type;
char *document_root;
char *gateway_interface;
char *http_accept;
char *http_accept_encoding;
char *http_accept_language;
char *http_connection;
char *http_cookie;
char *http_host;
char *http_referer;
char *http_user_agent;
char *query_string;
char *remote_addr;
char *remote_host;
char *remote_port;
char *remote_user;
char *request_method;
char *request_uri;
char *script_filename;
char *script_name;
char *server_admin;
char *server_name;
char *server_port;
char *server_protocol;
char *server_software;
char *server_signature;
char *unique_id;

/* Miscellaneous Informations Supported by qDecoder */
int year, mon, day, hour, min, sec;
};

```

---

## qCGIname()

Syntax: char \*qCGIname(void);  
 Function: SCRIPT\_NAME  
 Return:  
 Note:  
 Example:

```

char *cginame;
cginame = qCGIname();

```

---

## qDownload()

Syntax: int qDownload(char \*filename);  
 Function: , 가  
 Return: , -1  
 Note: qDownloadMime()  
 Example:

```

qDownload("/home/nobreak/myprg.exe");

```

---

## qDownloadMime()

Syntax: int qDownloadMime(char \*filename, char \*mime);  
 Function: .  
 Return: , -1  
 Note: ,



Example:

```
qDownload("/home/nobreak/myprg.gif", "image/gif");
```