NAME

abs2rel - make a relative path name from an absolute path name

SYNOPSIS

*char **
abs2rel(*const char *path*, *const char *base*, *char *result*, *size_t size*);

DESCRIPTION

The **abs2rel**() function makes a relative path name from an absolute path name *path* based on a directory *base* and copies the resulting path name into the memory referenced by *result*. The *result* argument must refer to a buffer capable of storing at least *size* characters.

The resulting path name may include symbolic links. The **abs2rel**() function doesn't check whether or not any path exists.

RETURN VALUES

The **abs2rel**() function returns relative path name on success. If an error occurs, it returns NULL.

EXAMPLES

```
char result[MAXPATHLEN];
char *path = abs2rel("/usr/src/sys", "/usr/local/lib", result, MAXPATHLEN);
```

yields:

```
path == "../../src/sys"
```

Similarly,

```
path1 = abs2rel("/usr/src/sys", "/usr", result, MAXPATHLEN);
path2 = abs2rel("/usr/src/sys", "/usr/src/sys", result, MAXPATHLEN);
```

yields:

```
path1 == "src/sys"
path2 == "."
```

ERRORS

The **abs2rel**() function may fail and set the external variable *errno* to indicate the error.

[EINVAL] The *base* directory isn't an absolute path name or the *size* argument is zero.

[ERANGE] The *size* argument is greater than zero but smaller than the length of the pathname plus 1.

SEE ALSO

rel2abs(3)

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BUGS

If the *base* directory includes symbolic links, the **abs2rel**() function produces the wrong path. For example, if ’/sys’ is a symbolic link to ’/usr/src/sys’,

```
char *path = abs2rel("/usr/local/lib", "/sys", result, MAXPATHLEN);
```

yields:

```
path == "../usr/local/lib"         /* It’s wrong!! */
```

You should convert the base directory into a real path in advance.

```
path = abs2rel("/sys/kern", realpath("/sys", resolvedname), result, MAXPATHLEN);
```

yields:

```
path == "../../../sys/kern"        /* It’s correct but ... */
```

That is correct, but a little redundant. If you wish get the simple answer ’kern’, do the following.

```
path = abs2rel(realpath("/sys/kern", r1), realpath("/sys", r2),
                                                            result, MAXPATHLEN);
```

The **realpath**() function assures correct result, but don’t forget that **realpath**() requires that all but the last component of the path exist.