

C library Macro - ERANGE

Description

As mentioned above, the C library macro **ERANGE** represents a range error, which occurs if an input argument is outside the range, over which the mathematical function is defined and `errno` is set to `ERANGE`.

Declaration

Following is the declaration for `ERANGE` Macro.

```
#define ERANGE some_value
```

Parameters

- `NA`

Return Value

- `NA`

Example

The following example shows the usage of `ERANGE` Macro.

```
#include <stdio.h>
#include <errno.h>
#include <math.h>

int main () {
    double x;
    double value;

    x = 2.000000;
    value = log(x);

    if( errno == ERANGE ) {
        printf("Log(%f) is out of range\n", x);
    } else {
        printf("Log(%f) = %f\n", x, value);
    }

    x = 1.000000;
```

```
value = log(x);

if( errno == ERANGE ) {
    printf("Log(%f) is out of range\n", x);
} else {
    printf("Log(%f) = %f\n", x, value);
}

x = 0.000000;
value = log(x);

if( errno == ERANGE ) {
    printf("Log(%f) is out of range\n", x);
} else {
    printf("Log(%f) = %f\n", x, value);
}

return 0;
}
```

Let us compile and run the above program that will produce the following result –

```
Log(2.000000) = 0.693147
Log(1.000000) = 0.000000
Log(0.000000) is out of range
```