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
```