

C LIBRARY FUNCTION - LDEXP

http://www.tutorialspoint.com/c_standard_library/c_function_ldexp.htm

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Description

The C library function **double ldexp***double x, int exponent* returns **x** multiplied by 2 raised to the power of **exponent**.

Declaration

Following is the declaration for ldexp function.

```
double ldexp(double x, int exponent)
```

Parameters

- **x** – This is the floating point value representing the significand.
- **exponent** – This is the value of the exponent.

Return Value

This function returns $x * 2^{\text{exp}}$

Example

The following example shows the usage of ldexp function.

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

int main ()
{
    double x, ret;
    int n;

    x = 0.65;
    n = 3;
    ret = ldexp(x ,n);
    printf("%f * 2^%d = %f\n", x, n, ret);

    return(0);
}
```

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

```
0.650000 * 2^3 = 5.200000
```

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