

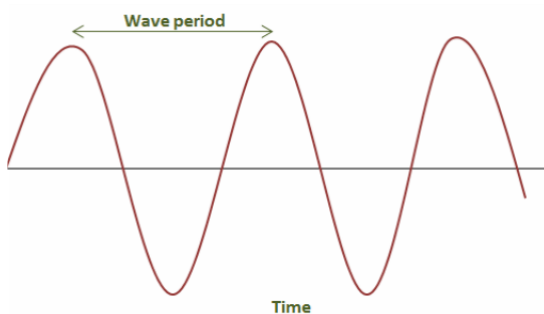


DarkNUS Electrical Team

Week 1: Basic C

Question 1: Frequency to period converter

Write a program `freq_converter.cpp` that reads in one positive 32bit integer representing the frequency of a signal in Hz (hertz, i.e. how many times the wave passes that point in a second) and print out the period of the signal ($1/\text{frequency}$). You may assume the input integer will never be less than 1.



Hint: the period might turn into a float!

Sample:

```
Input frequency: 100
Wave period: 0.01
```

Question 2: Prime checker

Write a program `is_prime()` that reads in one positive 32bit integer and returns whether the number is a prime or not. You may assume the number will always be 0 or above.

`#include <math.h>` For `sqrt()`

```
Input number: 21
Number is NOT a prime
```

```
Input number: 2      Input number: 4294967279
Number is a prime!   Number is a prime!
```

```
Input number: 1
Number is a prime!
```

In case yall forgot your math already 1 is NOT a prime number lol. CHECK THE EDGE CASES.

Question 3: Pyramid