

# Vampire Number Finder Readme :

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This program is designed to identify vampire numbers within a given range using a multi-threaded approach. A vampire number is a composite natural number with a pair of non-trivial factors, which, when multiplied together, reconstruct the original number using its digits.

## How to Compile and Run:

Ensure you have the GNU Compiler Collection (gcc) installed on your system.

1. Open a terminal (Command Prompt in Windows) in the directory containing the code file (`vampire\_number.c`).

2. Compile the code using the following command:

```
gcc vampire_number.c -lpthread
```

This command compiles the code, linking the pthread library (`-lpthread`) and generates an executable named `vampire\_number`.

3. Run the executable using the following command:

```
a
```

## Input File:

The program reads input parameters(num1 and num2) from a file named `input.txt`. Ensure that this file is present in the same directory.

## Input Format:

The input file should contain two integers separated by a space, representing the range of numbers and the number of threads can use, respectively.

Example `input.txt`:

1000 4

This specifies that the program will check numbers up to 1000 using 4 threads.

## Output:

The program outputs the following information:

Each vampire number found, along with the thread number that discovered it.

The total count of vampire numbers.

The execution time in seconds.

Feel free to modify the `input.txt` file.