doc.md 2024-05-06

General

This C program takes a virtual memory address as input and splits it into its corresponding page number and offset. It's a simple utility that demonstrates basic concepts of virtual memory management.

Usage

make n=19986

Implementation

The program takes one command-line argument, which should be a virtual memory address in hexadecimal format. It then converts the address to an unsigned long integer using strtoul function. After conversion, it prints the page number by right shifting the address by 12 bits (assuming a page size of 4 KB) and prints the offset by performing a bitwise AND operation with 0xfff.

Screenshots

```
vincent@DESKTOP-G0KHUT9:~/LOSE/memory$ make n=19986
gcc -o main main.c
./main 19986
Virtual address: 19986
Page number: 4
Offset: 3602
vincent@DESKTOP-G0KHUT9:~/LOSE/memory$
```