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#include <stdio.h>
#include <pthread.h>
#include <stdlib.h>
#include <string.h>

int primes_count;

void *primesThreadFunction(void *args){

    int n = *((int *) args);

    int flag = 0;
    int i;

    for(i=2; i<=n/2; ++i){
        if(n%i==0){
            flag=1;
            break;
        }
    }

    if (flag==0){
        primes_count ++;
        printf("%d is a prime number.",n);
    }
    else
        printf("%d is not a prime number.",n);

    pthread_exit(NULL);
}

int main(int argc, char *argv[]){

    int n_threads = atoi(argv[0]);
    pthread_t prime_threads[n_threads];

    int t;
    int returnCode;

    //Create n threads and let them calculate primes
    for(t=1;t<n_threads;t++){

        returnCode = pthread_create(&prime_threads[t], NULL,
            primesThreadFunction, (void *)t);
        if (returnCode) {
            printf("ERROR return code from pthread_create() : %d\n",returnCode);
            exit(-1);
        }
    }

    //Wait for all threads to exit
    for(t=0;t<=n_threads; t++)
        pthread_join(prime_threads[t], NULL);

    printf("Successfully exited all threads!\n");
    printf("Number of primes between 1 and %d = %d\n", n_threads, primes_count);
    return(0);
}

```