#include <stdio.h>

#include <stdlib.h>

#include <pthread.h>

#define NUM\_THREADS 5

void \*thread\_function(void \*arg){

int thread\_id = \*(int \*)arg;

printf("Thread %d: Hello, World!\n", thread\_id);

pthread\_exit(NULL);

}

int main() {

pthread\_t threads[NUM\_THREADS];

int thread\_args[NUM\_THREADS];

int i, result;

for (i = 0; i < NUM\_THREADS; i++) {

thread\_args[i] = i;

result = pthread\_create(&threads[i], NULL, thread\_function, &thread\_args[i]);

if (result != 0) {

perror("Thread creation failed");

exit(EXIT\_FAILURE);

}

}

for (i = 0; i < NUM\_THREADS; i++) {

result = pthread\_join(threads[i], NULL);

if (result != 0) {

perror("Thread join failed");

exit(EXIT\_FAILURE);

}

}

printf("Main thread: All threads have completed.\n");

return 0;

}