**EXPERIMENT – 11**

11. Illustrate the concept of multithreading using a C program.

#include <stdio.h>

#include <stdlib.h>

#include <pthread.h>

#define NUM\_THREADS 3

void\* threadFunction(void\* arg) {

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

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

pthread\_exit(NULL);

}

int main() {

pthread\_t threads[NUM\_THREADS];

int thread\_ids[NUM\_THREADS];

int i;

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

thread\_ids[i] = i + 1;

if (pthread\_create(&threads[i], NULL, threadFunction, (void\*)&thread\_ids[i]) != 0) {

perror("pthread\_create");

exit(1);

}

}

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

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

}

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

return 0;

}

SAMPLE OUTPUT:

Thread 1: Hello from thread!

Thread 2: Hello from thread!

Thread 3: Hello from thread!

Main thread: All threads completed.