**Experiment-30:Write C programs to demonstrate the following thread related concepts.**

**(i)create (ii) join (iii) equal (iv) exit**

Aim:

To demonstrate various thread-related concepts in C using pthread library, including:

1. Create: Creating a thread.
2. Join: Waiting for a thread to complete.
3. Equal: Checking if two threads are the same.
4. Exit: Exiting a thread.

Procedure:

1. Create: Use pthread\_create to create a thread that performs a specific task.
2. Join: Use pthread\_join to wait for the created thread to finish its task.
3. Equal: Use pthread\_equal to compare two thread identifiers.
4. Exit: Use pthread\_exit to terminate a thread.

Code:

#include <stdio.h>

#include <pthread.h>

#include <unistd.h>

void\* threadFunction(void\* arg) {

printf("Thread is running\n");

sleep(2);

return NULL;

}

int main() {

pthread\_t thread1, thread2;

pthread\_create(&thread1, NULL, threadFunction, NULL);

pthread\_create(&thread2, NULL, threadFunction, NULL);

pthread\_join(thread1, NULL);

pthread\_join(thread2, NULL);

if (pthread\_equal(thread1, thread2)) {

printf("Both threads are equal.\n");

} else {

printf("Threads are not equal.\n");

}

pthread\_exit(NULL);

return **0;**

}

Output:

**A screenshot of a computer

Description automatically generated**