Assignment #2
Pthread's Code Review

Giving the following Pthread code:

```
1 #include <pthread.h>
2 #include <stdio.h>
3 #include <unistd.h>
4 #include <assert.h>
5
6 const size_t NUMTHREADS = 3;
7
8 int done = 0;
9 pthread_mutex_t mutex = PTHREAD_MUTEX_INITIALIZER;
10 pthread_cond_t cond = PTHREAD_COND_INITIALIZER;
11
12 void* ThreadEntry( void* id )
13 {
14    const int myid = (long)id;
15
16    const int workloops = 5;
17    int i;
18    for( i=0; i<workloops; i++ )
19       {
20          sleep(1);
21       }
22
23    pthread_mutex_lock( &mutex );
24
25    done++;
26
27    pthread_cond_signal( &cond );
28    pthread_mutex_unlock( & mutex );
29
30    return NULL;
31 }
32
33 int main( int argc, char** argv )
34 {
35    pthread_t threads[NUMTHREADS];
36
37    int t;
38    for( t=0; t<NUMTHREADS; t++ )
39       pthread_create( &threads[t], NULL, ThreadEntry, (void*)(long)t );
40
41    pthread_mutex_lock( &mutex );
42
43    while( done < NUMTHREADS )
44       {
45          pthread_cond_wait( & cond, & mutex );
46       }
47
48    pthread_mutex_unlock( & mutex );
49
50    return 0;
51 }
```

1. Insert as many printf() as needed to the code to help understand how the main threads and individual worker threads process
2. Run the code on Palmetto , print out the output messages, explain the flow of the program with your output.