

```
1  #ifndef __OSDEFS_H
2
3  #include <stdint.h>
4  #include <stdio.h>
5  #include <LPC17xx.h>
6  #include <stdbool.h>
7
8  //global constants
9  #define MAX_STACK 0x2000
10 #define STACK_SIZE 512
11 #define MAX_THREADS ((MAX_STACK - STACK_SIZE)/STACK_SIZE)
12
13 #define ACTIVE 0
14 #define WAITING 1
15 #define SLEEPING 2
16 #define BLOCKED 3
17
18 #define TIMESLICE_DEFAULT 1000
19 #define TIMESLICE_IDLE 500
20
21 #define NONE -1
22 #define UART 0
23 #define GLOBAL_X 1
24 #define LEDS 2
25
26 //define thread struct
27 typedef struct{
28     uint32_t* TSP; //store thread stack pointer
29     void (*fun_ptr)(void); //store thread's function pointer
30
31     int status;
32     int timer; //in ms
33     int sleepTime;
34     int timeslice;
35     int waitMutex;
36
37 } threadStruct;
38
39 typedef struct{
40     bool available;
41     int currentOwner; //thread index
42
43 } mutexStruct;
44
45 #endif
```