

```
3  #include <pthread.h>
4  #include <semaphore.h>
5  #include <unistd.h>
6  int sum = 0;
7  sem_t mutex;
8
9  void *add(void *arg){
10     int *ptr = (int *) arg;
11     while(*ptr != -1){
12         sem_wait(&mutex);
13         sum += *ptr;
14         printf("value: %d sum %d\n", *ptr, sum);
15         sem_post(&mutex);
16         ptr++;
17     }
18     return NULL;
19 }
20
21 int main(int argc, char *args[]){
22     int A[4] = {1,2,3, -1};
23     int B[4] = {4,2,6, -1};
24
25     pthread_t t_a, t_b;
26     sem_init(&mutex, 0, 1);
27     pthread_create(&t_a, NULL, add, A);
28     pthread_create(&t_b, NULL, add, B);
29
30     pthread_join(t_a, NULL);
31     pthread_join(t_b, NULL);
32     printf("Total: %d\n", sum);
33
34     return 0;
35 }
36
```

C:\Users\kadi\OneDrive\Documents\multithreading.exe

```
value: 1 sum 1
value: 4 sum 5
value: 2 sum 7
value: 2 sum 9
value: 3 sum 12
value: 6 sum 18
Total: 18
```

```
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Process exited after 0.03724 seconds with return value 0
Press any key to continue . . .
```