



```
main.c
1 #include<stdio.h>
2 #include<stdlib.h>
3 #include<unistd.h>
4 #include<sys/shm.h>
5 #include<string.h>
6 int main()
7 {
8     int i;
9     void *shared_memory;
10    char buff[100];
11    int shmid;
12    shmid=shmget((key_t)2345, 1024, 0666|IPC_CREAT);
13    printf("Key of shared memory is %d\n",shmid);
14    shared_memory=shmat(shmid,NULL,0);
15    printf("Process attached at %p\n",shared_memory);
16    printf("Enter some data to write to shared memory\n");
17    read(0,buff,100);
18    strcpy(shared_memory,buff);
19    printf("You wrote : %s\n",(char *)shared_memory);
20 }
```

input

Enter some data to write to shared memory  
pushpaja  
You wrote : pushpaja

...Program finished with exit code 0  
Press ENTER to exit console.

C:\Users\pushpaja\OneDrive\Documents\OS q8.cpp - [Executing] - Dev-C++ 5.11

File Edit Search View Project Execute Tools AStyle Window Help

TDM-GCC 4.9.2 32-bit Profiling

(globals)

Project Classes Debug OS q6.cpp OS q7.cpp OS q9.cpp OS q8.cpp

```
1 #include <stdio.h>
2 #include <string.h>
3 #include <pthread.h>
4 int i = 4;
5 void* foo(void* p){
6     printf("Value received as argument in starting routine: ");
7     printf("%i\n", * (int*)p);
8     pthread_exit(&i);
9 }
10 int main(void){
11     pthread_t id;
12     int j = 1;
13     pthread_create(&id, NULL, foo, &j);
14     int* ptr;
15     pthread_join(id, (void**)&ptr);
16     printf("Value received by parent from child: ");
17     printf("%i\n", *ptr);
18 }
```

Compiler Resources Compile Log Debug Find Results Close

Abort Compilation

- Errors: 0  
- Warnings: 0  
- Output Filename: C:\Users\pushpaja\OneDrive\Documents\OS q8.exe  
- Output Size: 175.248046875 KiB  
- Compilation Time: 0.27s

☐ Shorten compiler paths

Line: 1 Col: 19 Sel: 0 Lines: 18 Length: 429 Insert Done parsing in 0 seconds

33°C  
Mostly cloudy



2:34 PM  
9/20/2022

C:\Users\pushpaja\OneDrive\Documents\OS q8.exe

```
Value received as argument in starting routine: 1
Value received by parent from child: 4

-----
Process exited after 0.01777 seconds with return value 0
Press any key to continue . . .
```



C:\Users\aswin\Documents\diningphilos.c - [Executing] - Embarcadero Dev-C++ 6.3

File Edit Search View Project Execute Tools AStyle Window Help

TDM-GCC 9.2.0 64-bit Release

(globals)

Project C ROUNDROBIN.C diningphilos.c

```
1 #include<stdio.h>
2 #include<stdlib.h>
3 #include<pthread.h>
4 #include<semaphore.h>
5 #include<unistd.h>
6 sem_t room;
7 sem_t chopstick[5];
8 void * philosopher(void *);
9 void eat(int);
10 int main()
11 {
12     int i,a[5];
13     pthread_t tid[5];
14     sem_init(&room,0,4);
15     for(i=0;i<5;i++){
16         sem_init(&chopstick[i],0,1);
17     }
18     for(i=0;i<5;i++){
19         a[i]=i;
20         pthread_create(&tid[i],NULL,philosopher,(void *)&a[i]);
21     }
22     for(i=0;i<5;i++){
23         pthread_join(tid[i],NULL);
24     }
25 void * philosopher(void * num)
26 {
27     int phil=*(int *)num;
28     sem_wait(&room);
29     printf("\nPhilosopher %d has entered room",phil);
30     sem_wait(&chopstick[phil]);
31     sem_wait(&chopstick[(phil+1)%5]);
32     eat(phil);
33     sleep(2);
34     printf("\nPhilosopher %d has finished eating",phil);
35     sem_post(&chopstick[(phil+1)%5]);
36     sem_post(&chopstick[phil]);
37     sem_post(&room);
38 }
39 void eat(int phil)
40 {
41     printf("\nPhilosopher %d is eating",phil);
```

Compiler Resources Compile Log Debug Find Results Console

Line: 24 Col: 31 Sel: 0 Lines: 41 Length: 884 Insert

C:\Users\aswin\Documents\diningphilos.exe

```
Philosopher 0 has entered room
Philosopher 3 has entered room
Philosopher 2 has entered room
Philosopher 1 has entered room
Philosopher 0 is eating
Philosopher 3 is eating
Philosopher 3 has finished eating
Philosopher 0 has finished eating
Philosopher 2 is eating
Philosopher 4 has entered room
Philosopher 4 is eating
Philosopher 2 has finished eating
Philosopher 4 has finished eating
Philosopher 1 is eating
Philosopher 1 has finished eating
-----
```

Process exited after 10.84 seconds with return value 0  
Press any key to continue . . .

```
1  #include<stdio.h>
2  int main()
3  {
4      int bsize[10], psize[10], bno, pno, flags[10], allocation[10], i, j;
5      for(i = 0; i < 10; i++)
6      {
7          flags[i] = 0;
8          allocation[i] = -1;
9      }
10     printf("Enter no. of blocks: ");
11     scanf("%d", &bno);
12     printf("Enter size of each block: ");
13     for(i = 0; i < bno; i++)
14         scanf("%d", &bsize[i]);
15     printf("\nEnter no. of processes: ");
16     scanf("%d", &pno);
17     printf("Enter size of each process: ");
18     for(i = 0; i < pno; i++)
19         scanf("%d", &psize[i]);
20     for(i = 0; i < pno; i++)
21         for(j = 0; j < bno; j++)
22             if(flags[j] == 0 && bsize[j] >= psize[i])
23             {
24                 allocation[j] = i;
25                 flags[j] = 1;
```

Abort Compilation

```
- Errors: 0
- Warnings: 0
- Output Filename: C:\Users\pushpaja\OneDrive\Documents\OS q10.exe
- Output Size: 126.091796875 KiB
- Compilation Time: 0.17s
```

☐ Shorten compiler paths

```
Enter no. of blocks: 3
Enter size of each block: 6
5
9
Enter no. of processes: 4
Enter size of each process: 7
2
5
3
Block no.      size      process no.      size
1              6          2                2
2              5          3                5
3              9          1                7
-----
Process exited after 39.77 seconds with return value 0
Press any key to continue . . .
```