

```
Monitor Dining-Philosophers;
enum {thinking, hungry, eating} state[5];
condition self[5];
int i;
void Entry pickup(int i)
{
    state[i]=hungry;
    test(i);
    if (state[i] != eating) self[i].wait;
    /*左右有人进餐则阻塞*/
}
void Entry putdown(int i)
{
    state[i]=thinking;
    test((i+4) % 5); /*唤醒左右*/
    test((i+1) % 5);
}
void Entry test(int k)
{
    if (state[(k+4) % 5] != eating) &&
        (state[k]=hungry) &&
        (state[(k+1) % 5] != eating)
```

```
{ state[k]=eating;
  self[k].signal); }
}
{
  for(i=0; i<=4; i++)    state[i]=thinking;
}
```

哲学家的描述如下:

```
philosopher(int i):
  while (true)
  {
    Thinking;
    pickup(i);
    Eating;
    putdown(i);
  }
```