**操作系统 平时作业（四）**

**高艺航 2018012950**

**问题：管程解决读者写者问题**

**解答：**

Moniter r\_w

{

condition rm,wm;

int readN,writeN;

void begin\_read( )

{

if(writeN==1)

{

cwait(rm);

}

readN++;

csignal(rm);

}

void end\_read( )

{

readN--;

if(readN==0)

csignal(wm);

}

void begin\_write( )

{

if(readN>0||writeN==1)

cwait(wm);

writeN=1;

}

void end\_write( )

{

writeN=0;

if(rm!=NULL)

csignal(rm);

else

csignal(wm);

}

{readN=0; writeN=0;}

}S;

void reader( )

{

while(true)

{

S.begin\_read( );

reading

S.end\_read( );

}

}

void writer( )

{

while(true)

{

S.begin\_write( );

writing

S.end\_write( );

}

}

main( )

{

cobegin

reader();

writer();

coend

}