

# Datorsystemteknik

## för D2, ICT2, E3 och Mek3

Nicholas Wickström

Högskolan i Halmstad  
Sverige

Datorsystemteknik – p.1/4

## Outline

- Föregående fl.
- Detaljerat exempel

Datorsystemteknik – p.2/4

```
Function send_wait
s1  Disable interrupt
s2  Save context
s3  IF first execution THEN
s4  Set: "not first execution any more"
s5  IF receiving task is waiting THEN
s6  Copy sender's data to the data area of the receivers Message
s7  Remove receiving task's Message struct from the mailbox
s8  Move receiving task to Readylst
s9  ELSE
s10 Allocate a Message structure
s11 Set data pointer
s12 Add Message to the Mailbox
s13 Move sending task from Readylst to Waitinglist
s14 ENDIF
s15 Load context
s16 ELSE
s17 IF deadline is reached THEN
s18 Disable interrupt
s19 Remove send Message
s20 Enable interrupt
s21 Return DEADLINE_REACHED
s22 ELSE
s23 Return OK
s24 ENDIF
s25 ENDIF
```

1

```
int nVar=1, nVar2=0;

void main(void)
{
  init_kernel ();
  create_task (t1, 100);
  create_task (t2, 200);
  mb=create_mailbox ( 1,sizeof (int) );
  run ();
}

void t1(void)
{
  send_wait (mb,&nVar);
  terminate ();
}

void t2(void)
{
  receive_wait (mb,&nVar2);
  send_wait (mb,&nVar);
  terminate ();
}

void idle (void)
{
  while(1);
}
```

2