

本次作业基于 Orange 第六章 r 版本代码进行修改

修改部分如下：

Makefile:

添加 run 参数，可以直接运行虚拟机

include/const.h :

设置系统调用表的大小

添加椅子数量和队列长度

添加颜色参数

include/global.h:

添加顾客、理发师、临界区信号量结构体

当前等待人数，当前顾客来的序号

include/proc.h:

设置任务个数、任务堆栈大小和总大小

为进程添加是否堵塞的属性

include/proto.h:

定义进程函数，添加信号量的等待队列

添加系统调用的声明

kernel/global.c:

添加进程表和系统调用表

kernel/main.c:

kernel_main 函数添加各个信号量的初始化和场景的初始化，清屏

添加任务的实现

添加输出内容的调用

为了方便输出数字添加顾客编号改为字符的操作

kernel/proc.c:

添加系统调用信号量 PV 操作的实现，输出显示和等待的实现

kernel/syscall.asm:

添加系统调用的汇编函数

截图：

一把椅子：

```
Bochs x86-64 emulator, http://bochs
client 0 come in
barber cut hair
client 0 get service and go
client 1 come in
client 2 come in
client 2 go
client 3 come in
client 3 go
client 4 come in
client 4 go
barber cut hair
client 1 get service and go
client 5 come in
client 6 come in
client 6 go
client 7 come in
client 7 go
client 8 come in
client 8 go
client 9 come in
client 9 go
barber cut hair
client 5 get service and go
```

两把椅子:

```
Bochs x86-64 emulator, http://bochs
client 0 come in
barber cut hair
client 0 get service and go
client 1 come in
client 2 come in
client 3 come in
client 3 go
barber cut hair
client 1 get service and go
client 4 come in
client 5 come in
client 5 go
client 6 come in
client 6 go
barber cut hair
client 2 get service and go
client 7 come in
client 8 come in
client 8 go
client 9 come in
client 9 go
barber cut hair
```

三把椅子:

```
id=0x1 client 0 come in
id=0x1 barber cut hair
k client 0 get service and go
client 1 come in
client 2 come in
id=0x1 client 3 come in
barber cut hair
client 1 get service and go
client 4 come in
barber cut hair
client 2 get service and go
client 5 come in
to 0 barber cut hair
de client 3 get service and go
tempo client 6 come in
barber cut hair
agement client 4 get service and go
to 0 client 7 come in
table barber cut hair
client 5 get service and go
ed 0x2 client 8 come in
barber cut hair
occ client 6 get service and go
640 A client 9 come in

er 59
54
2011/10/15 14:07:21 vruppert E
```

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