**sistemas operativos:**

sistemas operativos mal llamados embebidos

virtualiza los recursos: memoria, cpu

virtualizar: agarrar un objeto y generar una imagen que no es real virtual de un objeto fisico, generar algo abstracto a traves de algo concreto. Genero abstracciones de procesos

-the OS is sometimes known as a resource manager

#include <stdio.h>

#include <stdlib.h>

#include <sys/time.h>

#include <assert.h>

#include "common.h"

int main(int argc, char\*argv[])

{

if (argc != 2) {

fprintf(stderr, "usage: cpu <string>\n");

exit(1);

}

char \*str = argv[1];

while (1) {

Spin(1);

printf("%s\n", str);

}

return 0;

}

-to run programs, and stop them, and otherwise tell the OSwhich programs to run, there need to be some interfaces (APIs) that youcan use to communicate your desires to the OS

prompt> ./cpu A & ./cpu B & ./cpu C & ./cpu D &

[1] 7353

[2] 7354

[3] 7355

[4] 7356

A

B

D

C

A

B

D

C

A

#include <unistd.h>

#include <stdio.h>

#include <stdlib.h>

#include "common.h"

int main(int argc, char\*argv[])

{

int\*p = malloc(sizeof(int)); // a1

assert(p != NULL);

printf("(%d) address pointed to by p: %p\n",

getpid(), p); // a2

\*p = 0;// a3

while(1){

Spin(1);

\*p =\*p + 1;

printf("(%d) p: %d\n", getpid(),\*p); // a4

}

return 0;

}

Figure 2.3:A Program That Accesses Memory (mem.c)