

Write a LINUX program that will create a shared memory segment of size 1000, attach it to the current process, store the string "Hello Memory" in the shared segment, and print the string from shared memory. You must then detach the segment and destroy it before exiting your program. Use the last four digits of your social security number as the ID for the segment.

This function creates the segment.

```
int MyLastFour=1111,SegSize=1000;  
int MyShmid = shmget(MyLastFour,SegSize,IPC_CREAT|0x1c0);
```

MyLastFour must contain the last four digits of your social security number, SegSize is the size of the memory segment you must create, and IPC_CREAT|0x1c0 is just something you need.

The following function attaches the segment and gives you access to it by returning its address.

```
char * MyAddr = shmat(MyShmid,NULL,0);
```

MyShmid is the return value from shmget. NULL and 0 are constants.
The following function detaches the segment.

```
shmdt(MyAddr);
```

MyAddr is the return value from shmat.

The following function destroys the memory segment. If you forget this the memory segment won't go away. It will hang around until you finally destroy it. (It's a benign problem.)

```
shmctl(MyShmid,IPC_RMID,NULL);
```

MyShmid is the return value from shmget. IPC_RMID and NULL are constants.

You need to put the following includes at the beginning of your program. (In addition to the usual stuff.) (This comes after the usual stuff.)

```
#include <sys/ipc.h>  
#include <sys/shm.h>  
#include <errno.h>  
#include <unistd.h>
```

TURN IN: A printout of your code and a floppy or a CDR containing your source code. (Do a file transfer to Windows if you have to.)