

## ort Program 3: Deadlock detector

**Due: Wednesday, Mar 15 at 11:59 pm**

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### Overview

In this assignment you will implement the deadlock detection algorithm described in class. You will submit a single source module *deadlock.c* containing a single C function *deadlock.c* whose prototype is:

```
int deadlock(  
int numres,           // number of resource classes  
int numproc,         // number of processes  
int *avltab,         // pointer to the available table  
int *reqtab,         // pointer to the requested table  
int *alloctab,       // pointer to the allocated table  
int *numdead,        // number of processes involved in deadlock  
int *deadtub)        // id's of deadlocked processes  
}
```

Your function should return 1 if the system contains a deadlock and 0 if it does not. Input parameters appear in **blue**. The value of these parameters *must not be changed*. Output parameters appear in **red**. Your function *must set these parameters*.

Resource identifiers take on values in the set (0, 1, ... , numres-1). Process identifiers are similarly (0, 1, ... , numproc-1).

You are responsible for developing your own “main” function to test your program with but DO NOT TURN IT IN.

## How to submit your program:

**NOTE:** This procedure has **NOTHING** in common with "handin" nor "sendlab"  
Do **NOT** even **TRY** to think about how they fit into this procedure because  
**THEY DON'T!!**

<<<Do NOT turn in any image files, core files, makefiles etc.>>>

You must turn in 1 file: deadlock.c

1. From any departmental Solaris system *ssh* to workstation *jmw*
2. The submission directories lie in the directory `/local/jmw2/322/sp3` which is available **ONLY IF YOU HAVE LOGGED INTO WORKSTATION jmw**. Each student has a subdirectory of `/local/jmw2/322/sp3`. The name of your subdirectory is your userid (in the example we will assume your id is *wjsmith*).
3. copy (via the `cp` command) required file to your subdirectory in `/local/jmw2/322/sp3`

For example:

```
cp /home/wjsmith/322/sp3/deadlock*.c /local/jmw2/322/sp3/wjsmith
```

4. Don't modify the permissions on your subdirectory. They are set so that **ONLY** you can access your directory.

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After you think you have turned your programs in, its a good idea to  
`cd /local/jmw2/322/sp3/wjsmith`  
and make sure your files are there and they still compile and work correctly.