CS201 Spring 2019
Assignment #1: 5 points
Due Friday, Jan. 25th at 11:59 pm

(1) Write a function in C that takes two arguments:
- n, an integer
- sum, a pointer to integer

So the function will be: int calculateSum(int n, int *sum);

The function should compute the sum of the integers 1 + 2 + ... + n and put that value in the sum. If n >= 0, then return 0; else return 1.

(2) Write a function in C that takes a char * and an int argument and mallocs and initializes a StudentData **

int createRecord(int id, char *name, StudentData **record);

Use this struct:

```
typedef struct {
  char name[32];
  int id;
} StudentData;
```

~~You malloc a new StudentData struct and then assign the id parameter to the id field in the struct and do strcpy() from the name parameter to the name field in the struct.~~

~~If the name is > 31 characters long, then return 1 and return a NULL through the record parameter; otherwise, return 0 and return a pointer to the memory you malloc'd through the record parameter.~~

If the name is > 31 characters long, then return 1 from from the function and pass a NULL through the record parameter.

Otherwise, malloc a new StudentData struct and assign the id parameter to the id field in the struct and do strcpy() from the name parameter to the name field in the struct, and return 0 fom the function and pass a pointer to the memory you malloc'd.

The C function for checking the length of a string is strlen():

strlen("hello") is 5
strlen("") is 0

Call your function this way:

int id = 17;

```
char *name = "Edsger Dijkstra";
StudentData *record;

int rtnval = createRecord(id, name, &record);
```

Here's what you should submit to Blackboard.

(1) a file warmup.netid.h

Use your UVM netid in the filename. This file should contain your declaration of StudentData and prototypes for the two functions that you write.

(2) a file warmup.netid.c

This will have your code. This file should include your .h file. Your .c file should have code only for your two functions--do not put a main() in the file that you submit.

Testing and development

You'll need to create a main() function as you develop and test this. In your main(), put in calls to your two functions with various inputs to test that your functions are working correctly. But when you're ready to submit, first strip out your main() function.