

```

1  /*****
2  // file:simple_math.h
3  //simple_math.h: implementation of basic algebraic functions
4
5  // define guard
6  #ifndef SIMPLE_MATH_H_
7  #define SIMPLE_MATH_H_
8
9  // function prototypes
10
11 // add: adds two integers a and b, returns result
12 int add(int a, int b);
13 // mult: multiplies two integers
14 int mult(int a, int b);
15
16 #endif // SIMPLE_MATH_H_
17
18 /*****/
19 // file: simple_math.c
20 #include "simple_math.h"
21
22 //function implementations
23 int add(int a, int b){
24     return a+b;
25 }
26
27 int mult(int a, int b){
28     return a*b;
29 }
30
31 /*****/
32 * PROJECTS: LEARN HOW TO SPLIT PROGRAMS IN MODULES *
33 *****/
34 // file: projects.c
35
36 #include <stdio.h>
37 #include "simple_math.h"
38
39 int main(){
40     printf("add(1,3) = %d\n", add(1,3));
41     printf("mult(1,3) = %d\n", mult(1,3));
42 }
43
44 /*****/
45 Commands:
46 gcc -c simple_math.c -o simple_math.o
47 gcc -c projects.c -o projects.o
48 gcc projects.o simple_math.o -o projects
49
50 for shared library:
51 gcc -c -fPIC simple_math.c -o simple_math.o
52 gcc -shared -fPIC simple_math.o -o libsimple.so
53 gcc projects.c -L. -lsimple -o projects
54
55
56

```