Favourite Number 2

> This is a **warmup** exercise. It is **not compulsory**, and may be completed **individually or with your lab partner**.

Last week we looked at my favourite number, 17. This week we are going to write some functions to examine the properties of the user's favourite number. Copy the program `favourite2.c` from the course account to your directory by typing **(make sure you type the dot at the end)**:

```
$ cp /web/cs1511/17s2/week03/files/favourite2.c .
```

The dot '.' is a shorthand for the current directory and there is a space between `favourite2.c` and the next dot. You can check that the file has been copied by typing:

```
$ ls
favourite2.c
```

This file already has a main function that is complete, do not change anything in it.

Functions to Complete

There are three function prototypes for you to implement. These are:

```
int square (int n);
void printOddOrEven (int n);
int multiply (int a, int b);
```

The `void printOddOrEven (int n)` function takes in an integer, `n`, and prints out whether the number is odd or even, in this format: " `n` is odd." It does not return a value.

Both the `square` and `multiply` functions return a value. The `int square (int n)` function takes in an integer, `n`, and should return `n` squared. The `int multiply (int a, int b)` function takes in two integers, `a` and `b`, and returns `a` times `b`.

Some examples

```
$ ./favourite2
Enter your favourite number: 4
You entered 4.
4 doubled is 8.
4 squared is 16.
4 x 17 is 68.
4 is even.
```

```
$ ./favourite2
Enter your favourite number: -1
You entered -1.
-1 doubled is -2.
-1 squared is 1.
-1 x 17 is -17.
-1 is odd.
```

To run some simple automated tests:

```
$ 1511 autotest favourite2
```

To run Styl-o-matic:

```
$ 1511 stylomatic favourite2.c
Looks good!
```

You'll get advice if you need to make changes to your code.

Submit your work with the *give* command, like so:

```
$ give cs1511 wk03_favourite2
```

Or, if you are working from home, upload the relevant file(s) to the `wk03_favourite2` activity on [Give Online](#).