Lab 4

On Cloud9, create a folder named "lab4" in your cse201 workspace. Store all your work for lab 4 in that folder. Like all the other labs, you should have 2 files per excercise: the source file and the compiled program.

For these exercises, you will create programs that depend on random number generation. Here is an example program that generates 3 random numbers:

```
#include <iostream>
#include <string>
#include <random>
using namespace std;

int main()
{
    random_device rng;
    cout <<
        rng() << endl <<
        rng() << endl <<
        rng() << endl;
}
```

Note that you should include the "random" header file near the top of your source file.

The data type `random_device` generates a random integer each time you use the function call operator on it. The integer that's generated is within a range of 0 to approximately 4 billion, inclusive. You can use the modulo operator on the result to apply an upper limit on this range.

Exercise 1

Create a program that simulates a coin flip by randomly displaying "heads" or "tails". Name your source file flip.cpp.

Exercise 2

Create a program that generates two random integers, each with a value between 1 and 6 inclusive. Name your source file dice.cpp.

Exercise 3

Create a program that plays rock, paper, scissors with you. Name your source file rps.cpp.

Exercise 4

Create a program that generates a random fortune (like messages you would find in a fortune cookie). Your program should have at least 5 possible fortunes. Name your source file fortune.cpp