# CIS 15 Spring 2010 Homework I

## Instructions

- This is the first homework assignment for CIS 15.

- The entire assignment will be worth 5 points.

- **It is due on Monday February 15th** and must be submitted by email (as below).

- **Follow these emailing instructions:**

  1. Create a mail message addressed to *parsons@sci.brooklyn.cuny.edu* with the subject line **CIS 15 HW1**.
  2. Attach ONLY the **.cpp** files for each part.
  3. Write your name, that is the name under which you registered for the course, in the email. When I get an email from `deathmetal@aol.com` or `pinkprincess@yahoo.com`, I can usually guess whose program it is, but that is not as good as *knowing* whose program it is.
  4. Failure to follow these instructions will result in points being taken away from your grade. The number of points will be in proportion to the extent to which you did not follow instructions. . . (which can make it a lot harder for me to grade your work — grrrr!)

## 1 Note

This homework assumes a basic knowledge of C++. If there are things mentioned in here that you don't understand, you should:

- Look them up, either in the textbook, or online (there is lots of C++ documentation online).

- Ask me about them in an email (I may just refer you to the textbook or an online reference).

- Ask me to discuss them in class.

## 2 A program to play Craps

Your homework is to write a program that simulates a game of Craps played against the computer. From your perspective as a programmer of the game, this is what is important:

1. You have to simulate the rolling of a die. This will mean using the `rand` function.

2. The first thing that the program has to do is to simulate the player rolling two dice.

3. If the result of this first throw is a 2, a 3, or a 12, the result is "craps", and the player loses.

4. If the result of the first throw is a 7 or an 11, the result is a "natural", and the player wins.

5. For all other results, the number thrown becomes the player's "point".

6. The program has to simulate the dice being thrown again.

7. If the result is the point, then the player wins.

8. If the result is a 7, the player loses.

9. Otherwise the player has to throw again and the game continues from number seven in this list — the point doesn't change.

The mark you get for your program will depend on how many of the things listed below that you include in your program.

# 3   How I'll mark your program

This defines how your mark will be determined.

- If your program compiles, runs, prints out the results of each throw and the results of the game and has the behavior described above you will get 2 points.

- If your program is well commented, you'll get another 0.5 points.

- If your program uses `srand` to set the random number seed differently every time the program runs, you'll get another 0.5 points.

- If your program has a function that simulates rolling one die, and another function, which uses that first function to simulate rolling two dice, then you'll get another 0.5 point.

- If your program uses an `enum` to define an enumerated type, then you'll get another 0.5 points.

- If your program waits for input between each simulated rolling of the dice, then you'll get another 0.5 points.

- If your program includes a function with arguments, then you'll get another 0.5 points.

for a maximum of 5 points.