

PROGRAMMING IN C

PROJECT #1

DUE: 11:59:59 ON 11/10/98

We are going to write a program to play a common Casino game called Craps. The rules of craps are fairly simple:

- The Player rolls the dice for the first time
- A roll of 7 or 11 means the Player wins. A roll of 2, 3, or 12 means the Player loses.
- Any other roll is designated the Player's "Point"
- The Player then rolls the dice until one of the following occurs: The Player rolls the point value, in which case the Player wins; or the Player rolls a 7, in which case the Player loses.

During each round the Player places a bet. If the Player wins, then they receive their bet from the house, if they lose, they lose their bet.

Write a program to play this game. It should prompt for the bet, roll the dice as many times as needed, displaying the results to the Player. If the player enters a 0 bet, end the game. The player should start with \$50.

Hints

- ◆ Design an algorithm for this program before you begin coding
- ◆ You will probably need to use a while loop. If you start the project before we cover while loops in class, write the program so that it plays one game of craps, and then modify it once we've covered loops
- ◆ You will need to be familiar with most of the topics we've covered in class to make this program work
- ◆ Instructions for generating random numbers are given in your text. If you have problems, visit the Instructor's office hours
- ◆ Start the project early, not the night before the deadline! If you have difficulty, do not hesitate to ask for help.

Submission & Grading

You may use any compiler you have access to run your project. Make sure that it is strictly ANSI compatible. (I suggest compiling it on RCS using "gcc -ansi -Wall -pedantic" as suggested in lecture #1 -- that's how we will grade it).

Create a file called README, containing the following information: your name, where you developed the project, your compiler, instructions on your program's use, and anything else you think we should know in grading your project.

To submit your project, transfer it to your RCS account. If you've developed it in Sage 3101 or another PC lab, copy your files to disk and bring them to the lab. Use FTP Voyager to connect to RCS, and transfer the files. Name your project file "craps.c" At a UNIX prompt, execute the following commands:

```
tar cvf project1.tar craps.c README
gzip project1.tar
uuencode project1.tar.gz project1.tar.gz > project1.tar.gz.uu
mail lij3@cs.rpi.edu < project1.tar.gz.uu
```

What you've just done is to "tar" the files, compressed them, changed them to a form suitable for electronic mail, and then mailed them to the TA.

Grading will be based on the following:

- ◆ Documentation: 20%
 - ◆ Is your program well commented?
 - ◆ Is the README file complete?
- ◆ Style: 40%
 - ◆ Is your program easy to follow logically?
 - ◆ Did you choose appropriate variable names?
 - ◆ Did you make appropriate use of whitespace and indentation?
- ◆ Functionality: 40%
 - ◆ Does your program do what it is supposed to?
 - ◆ Does your program compile correctly?