

asgn 1: DESIGN - Pass the Pigs

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Purpose:

This program is a simplified version of David Moffat's *Pass the Pigs* game. The user can decide the number of players (must be 2 to 10 players inclusive) and a "seed" for the game to "pseudo-randomize" the pig rolls each round as well as the winner of the game. To summarize the rule, each player starts with 0 points, and they will start rolling the pig, they will keep rolling until they roll a "side", and their turn will end. The cycle will continue until someone reaches 100 points, which will determine the winner.

How to use the program:

To use the program, download pig.c and the makefile. Then type in "make" so the makefile will do its job and make a binary/executable file. Then in your terminal, type in "./pig" to run the program, then input the number of players and seed as prompted.

Pseudo Code:

Take user's input for the number of players, prompt "2-10 players"

Display error otherwise

Take user's input for the random seed, prompt "unsigned 32 bit int"

Display error otherwise

Initialize each player's score with 0 points

A while loop (while there's no winner)

 go through the player array, starting at the 0 position:

 roll the pig

 while no side roll

 switch cases for result of the roll

 Case 0:

 side

 Case 1:

 back

 Case 2:

 upright

 Case 3:

 snout

 Default:

 ear

if one of the players' score is larger than 100 they win and ends the program.

Functions:

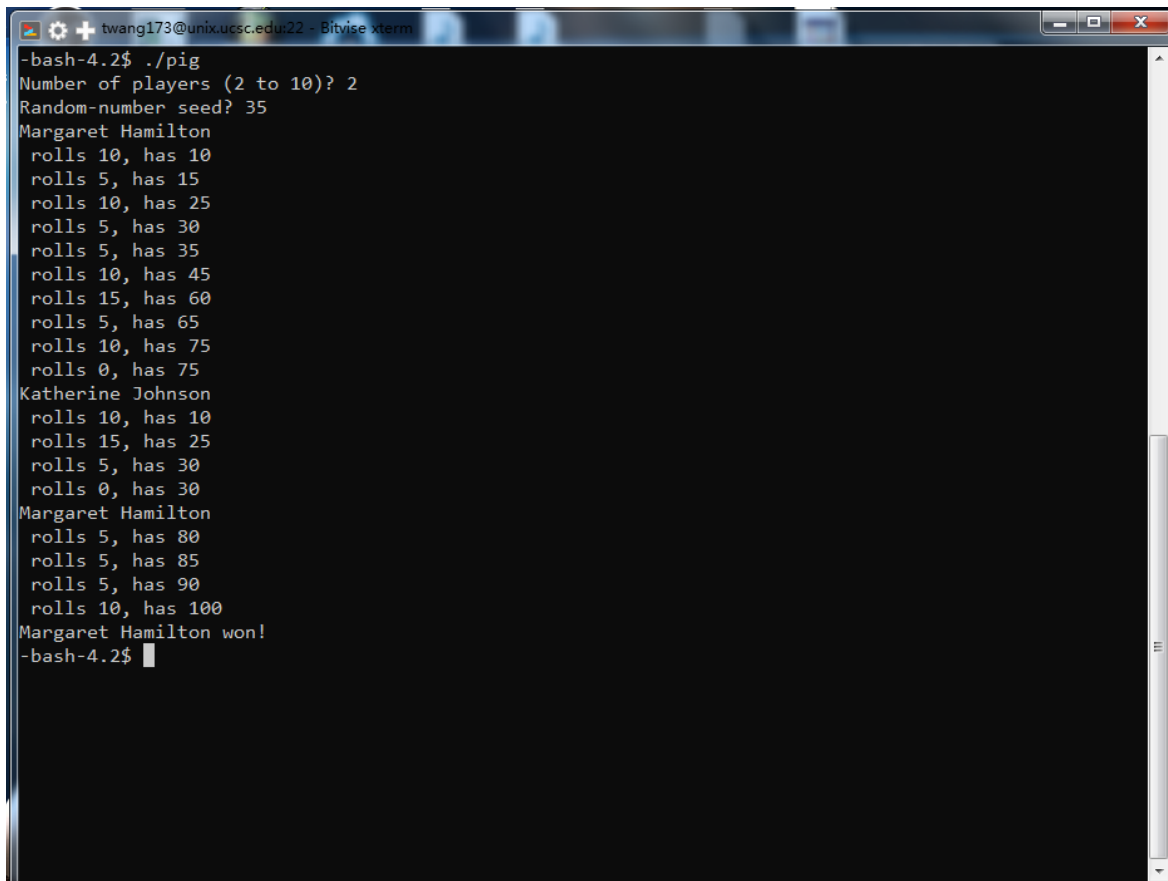
- srandom(SEED), random() (have to include <stdlib>)
- typedef enum {SIDE, RAZORBACK, TROTTER, SNOUTER, JOWLER} Position;
- const Position pig[7] = {SIDE, SIDE, RAZORBACK, TROTTER, DNOUTER, JOWLER, JOWLER};

Results:

Number of players (2 to 10)? Input: 0

“Invalid number of players. Using 2 instead.”

else:



```
-bash-4.2$ ./pig
Number of players (2 to 10)? 2
Random-number seed? 35
Margaret Hamilton
rolls 10, has 10
rolls 5, has 15
rolls 10, has 25
rolls 5, has 30
rolls 5, has 35
rolls 10, has 45
rolls 15, has 60
rolls 5, has 65
rolls 10, has 75
rolls 0, has 75
Katherine Johnson
rolls 10, has 10
rolls 15, has 25
rolls 5, has 30
rolls 0, has 30
Margaret Hamilton
rolls 5, has 80
rolls 5, has 85
rolls 5, has 90
rolls 10, has 100
Margaret Hamilton won!
-bash-4.2$
```