Assignment 1 – Pass the Pigs

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Purpose

This program simulates a simplified version of the Pass the Pigs game by David Moffat. In the game, players roll a dice to earn points until one of them reaches over 100. The computer outputs a predetermined simulation of the game based on the number of players and a seed. The seed is just a number, and so is the number of players, and both are provided by the user.

How to Use the Program

Running the program will allow the terminal to prompt the user with the line `"Number of players (2 to 10)?"` The user should enter a number between 2 and 10 and hit enter. Following this, the terminal will print `"Random-number seed?"` The user can input a random number, and if it is not a valid seed, a default seed will be generated. The program will then simulate the game print the process and the results.

Program Design

The program will have data structures of int, arrays, and enums.

Data Structures

Ints would contain the two user inputs, the number of players and the seed. The arrays would be used for storing the player's scores. And enum would be used for the information of the dice rolls, and to go to the next turn.

Algorithms

Will use a while loop where the condition is whether a player has reached a hundred points. Inside the loop, the dice will be rolled, the player's score will be updated, and then if the roll is a zero, then the player will be switched to the next player.

```
loop while ( player_score <= 100 ){
    print( dice_roll )
    current_player_score += dice_roll
    if ( dice_roll == 0 ) then
        current_player = next_player
}
print( winner )
```

Function Descriptions

There will be one main function only.

- The inputs will be the number of players and the seed
- The outputs will be the printed simulation of the game
- The purpose of the main function is to simulate the game "Pass the Pigs", using the inputted number of players and seed.
- The function will also construct the required data structures in order for the loop to work.

Results

I have not finished my code.

Audience: Write this section for the graders. If you completed only part of the assignment, explain that here.

To write this section, use your code according to its intended purpose. Does it successfully achieve everything it should? Is anything lacking? Could anything be improved? Talk about all of that here, and use your code's output to prove it.

You can include screenshots of program output, as I have in Fig. 1.

Figure 1: Screenshot of the program running.