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The Full Stack Engineer interview process

1. Coding Round (4-5 hrs offline take-home assignment)
2. Schema Design & System Design with Lead/Principal Engineer (1.5 hrs F2F)
3. Hiring Manager Round with Engineering Manager/Director of Tech (30 mins F2F)

Why this coding round?

Well there are many reasons why:

- If you were a restaurant would you hire a chef without tasting their food?
- If you are a master chef (engineer) would you join a restaurant who does not even taste your delicacies before handing you the keys to the kitchen?
- We at GL are looking for folks who love software engineering and if you are one of those then this coding round is the best way for you to show us your chops.

Coding Round Problem Statement

Let us code "The Game of Dice"

The "Game of Dice" is a multiplayer game where N players roll a 6 faced dice in a round-robin fashion. Each time a player rolls the dice their points increase by the number (1 to 6) achieved by the roll.

As soon as a player accumulates M points they complete the game and are assigned a rank. Remaining players continue to play the game till they accumulate at least M points. The game ends when all players have accumulated at least M points.

Rules of the game

- The order in which the users roll the dice is decided randomly at the start of the game.
- If a player rolls the value "6" then they immediately get another chance to roll again and move ahead in the game.
- If a player rolls the value "1" two consecutive times then they are forced to skip their next turn as a penalty.

Implementation Details

- Implement a standalone program in your favorite programming language which takes the values N (number of players) and M (points of accumulate) as command line arguments.
- Name the players as Player-1 to Player-N and randomly assign the order in which they will roll the dice.
- When it's the turn for Player-X to roll the dice prompt a message like "Player-3 its your turn (press 'r' to roll the dice)"
- Randomly simulate a dice roll, display the points achieved and add the points to the user's score.
- Print the current rank table which displays the points of all users and their rank after each roll.
- If the user gets another chance because they rolled a '6' or they are penalised because they rolled '1' twice consecutively then print appropriate message on standard output to inform the user.
- If a user completes the game, print an appropriate message on the output displaying their rank.

Evaluation Criteria

- Code correctness w.r.t. the specifications given above
- Code quality in terms of readability, structure and idiomatic correctness
- Code performance
- Test Cases are a bonus!

Submission Details

Please share a public Github repository with your solution and instructions on how to run the code in the README.md file.

Happy coding and all the best! Looking forward to meeting you on the other side!