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Job Adventures. For Geeks.

PROBLEM CONTEXT

Our problem is set in the planet of Lengaburu, in the distant distant galaxy of Tara B. And it's the finals of the Intergalactic T20 Cup! Lengaburu and Enchai, neighbours and fierce rivals, are fighting it out for the title.

Lengaburu's star batsman Kirat Boli is at the crease. Can he win it for Lengaburu? Write code to simulate the last 4 overs of the match.

PROBLEM 1: THE LAST FOUR

It's the last 4 overs of the match. **Lengaburu needs 40 runs to win and with 3 wickets left**. Each player has a different probability for scoring runs. Your coding problem is to simulate the match, ball by ball.

The match simulation will require you to use a weighted random number generation based on probability to determine the runs scored per ball. For this randomizer, you can use any external library of your choice (if you wish to, the choice is yours).

PROBABILITY TABLE

PLAYER PROBABILITY

	DOT BALL	1	2	3	4	5	6	OUT
Kirat Boli	5%	30%	25%	10%	15%	1%	9%	5%
N.S Nodhi	10%	40%	20%	5%	10%	1%	4%	10%
R Rumrah	20%	30%	15%	5%	5%	1%	4%	20%
Shashi Henra	30%	25%	5%	0%	5%	1%	4%	30%

Rules of the Game

1. Batsmen change strike end of every over. They also change strike when they score a 1,3 or 5
2. When a player gets out, the new player comes in at the same position.
3. Assume only legal balls are bowled (no wides, no no-balls etc..). Therefore an over is always 6 balls.

RULES OF CRICKET

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SAMPLE OUTPUT

Lengaburu won by 1 wicket and 2 balls remaining

Kirat Boli - 12 (6 balls)
NS Nodhi - 25 (11 balls)
R Rumrah - 2* (3 balls)
Shashi Henra - 2* (2 balls)

Sample commentary

4 overs left. 40 runs to win

0.1 Kirat Boli scores 1 run
0.2 NS Nodhi scores 4 runs
0.3 NS Nodhi scores 1 run
0.4 Kirat Boli scores 2 runs
0.5 Kirat Boli scores 3 runs
0.6 NS Nodhi scores 1 run

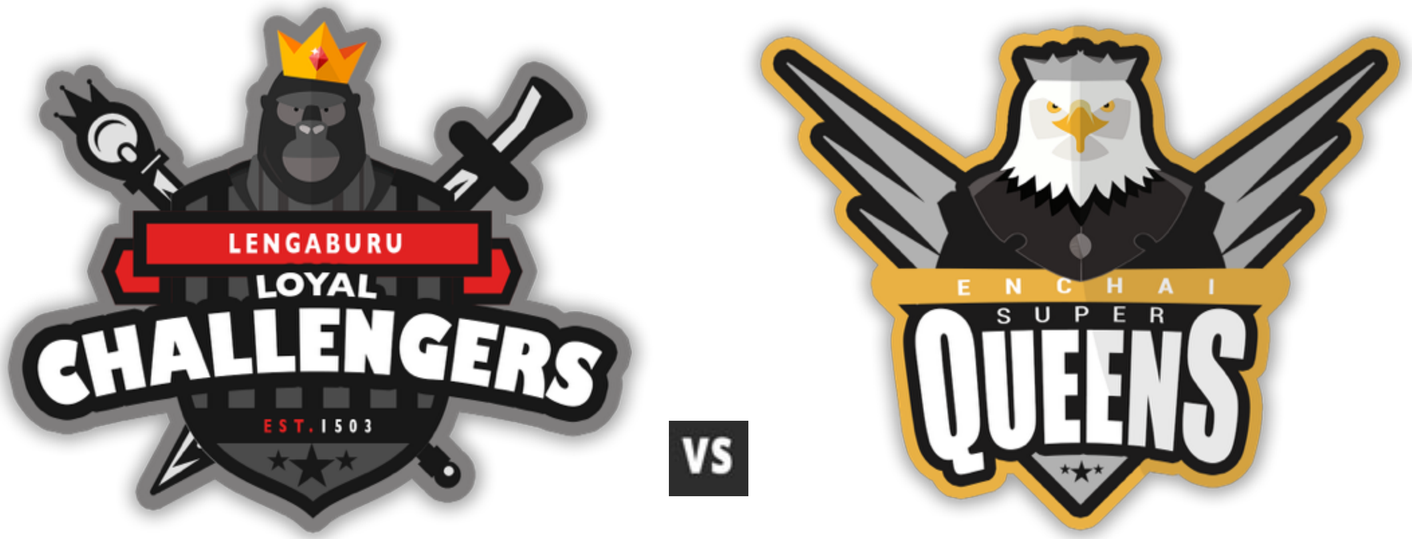
3 overs left. 28 runs to win

1.1 NS Nodhi scores 2 runs
....

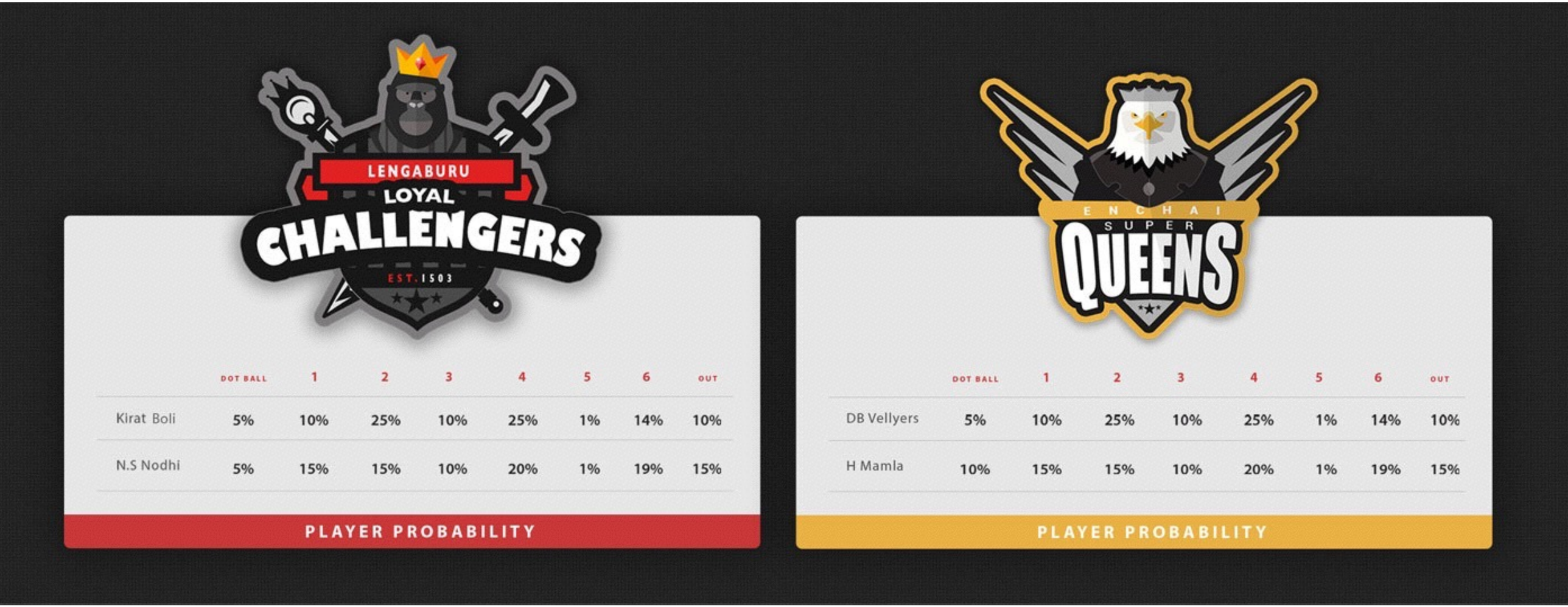
Note: You can assume both Kirat Boli and NS Nodhi are batting on 0* when the simulation begins

PROBLEM 2: THE TIE BREAKER

The final has resulted in a tie! Just like '07. Now the result will be decided by a one over tie breaker. 2 batsmen, 6 balls, who will win?



PROBABILITY TABLE



	DOT BALL	1	2	3	4	5	6	OUT
Kirat Boli	5%	10%	25%	10%	25%	1%	14%	10%
N.S Nodhi	5%	15%	15%	10%	20%	1%	19%	15%

PLAYER PROBABILITY

	DOT BALL	1	2	3	4	5	6	OUT
DB Vellyers	5%	10%	25%	10%	25%	1%	14%	10%
H Mamla	10%	15%	15%	10%	20%	1%	19%	15%

PLAYER PROBABILITY

Note: Probability chart for Kirat Boli and NS Nodhi have changed from problem 1 (to reflect a 1 over match)

SAMPLE OUTPUT

Enchai won with 4 balls remaining

Lengaburu
Kirat Boli - 4 (2 balls)
NS Nodhi - 0* (0 balls)

Enchai
DB Vellyers - 1* (1 ball)
H Mamla - 4* (1 balls)

Sample commentary

Lengaburu innings:
0.1 Kirat Boli scores 4 runs!
0.2 Kirat Boli gets out! Lengaburu all out

Enchai innings:
0.1 DB Vellyers scores 1 run
0.2 H Mamla scores 4 runs! Enchai wins!

Note: Assume Lengaburu always bats first

WHAT WE LOOK FOR IN YOUR CODE

Ready to hit a six? Remember that it is not just about getting the ouput, but how you get it. We care about how well modelled your code is, how readable, extensible, well tested it is.

Note: In cases where there is an edge case which is not mentioned in this problem statement, go-ahead and make an assumption. Just let us know what it is in a readme file.

SUBMITTING CODE

1. Please compress the file before upload. We accept .zip, .rar, .gz and .gzip

2. Name of the file should have the name of the problems you have solved Set4Problem1.zip or Set4Problem2.zip or Set4Problem12.zip

3. Upload the file in a way that makes it easy for us to get it running. This will factor into your evaluation.

4. Usage of non-essential 3rd party libraries will affect your evaluation.

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