Prediction — Commentary — Super Over

SO YOU THINK YOU KNOW

CRICKET

A coding challenge.

EVEREST ENGINEERING

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BACKGROUND

Everest Engineering wants to host their first ever **Internal T20 Tournament** with their Indian and Australian Teams - **CricSummit 2021.** An event of Unison, CricSummit is at the intersection of flairs for Coding, Data Science and Cricket.

For the upcoming T20 match Event, you are required to **submit the code** to predict shot outcomes, a commentary and score at the end of the innings (Spoiler: Super Over).

INDIA **11**	
Ranganathan B	Varenya Raj
Sudhakar Dharwada	Naveen Kumar B
Mohammed Faizuddin	Nidhuraj
Lakshmi Prasanna	Ravinder Deolal
Venkateshwar K	Anirudh B S

AUSTRALIA **11**	
Craig Brown	Asad Naveed
Chris Jones	Daniel Prager
Martin Chesbrough	Brent Snook
Ringo Thomas	Rick Giner
Benjamin Blackwood	Charlotte

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PROBLEM STATEMENT

Imagine the teams are allowed to play only **10 kind of Shot/Bowl** types.
Form a strategy to predict the outcome for the upcoming challenges.

For example, take a Bouncer Ball. If anyone from the team bowls a bouncer ball, which shot the player needs to play? Of course a Pull Shot or Uppercut.

So the outcome probability would be 1,2,3,4,5,6 runs or even a wicket. If the player hits the bowl on time, the shot outcome would be 4/6 runs. If it is hit early - 1/2 runs. And if it is hit very late, probability would be a wicket. We have 10 batting shots to predict the outcome with a bouncer ball. And we have similar 10 bowl types. There could be a minimum of 100 outcomes with each ball and shot.

You should make the outcome chart keeping the above example in mind.

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CHALLENGE#1 PREDICT OUTCOME

Create an outcome chart from the below mentioned cricket strategies. And write code to predict shot outcome for a random bowl/shot from the same chart.

BOWLING CARDS

Bouncer	Inswinger
Outswinger	Leg Cutter
Off Cutter	Slower Ball
Yorker	Pace
Off Break	Doosra

BATTING CARDS

Straight	Sweep
Flick	CoverDrive
LegLance	Pull
Long On	Scoop
SquareCut	UpperCut

SHOT TIMINGS

- Early
- Good
- Perfect
- Late

CHALLENGE#1 PREDICT OUTCOME
(Contd.)

INPUT FORMAT

```
1   bowl_card_name1 shot_card_name1 shot_timing1
2   bowl_card_name2 shot_card_name2 shot_timing2
3   ..
```

OUTPUT FORMAT

```
1   shot_outcome1
2   shot_outcome2
3   ..
```

INPUT SAMPLE

```
1   Bouncer Pull Perfect
2   Yorker Straight Early
3   Pace(Straight Ball) Straight Good
```

OUTPUT SAMPLE

```
1   4 runs
2   1 wicket
3   2 runs
```

CHALLENGE#2 COMMENTARY

Any game is boring without commentary. Cricket, even more so. Write code to say some commentary based on the outcome. Below are some commentary statements:

- It's a wicket.
- Excellent line and length.
- Edged and taken.
- It's a huge hit.
- Just over the fielder.
- Excellent effort on the boundary.
- Convert ones into twos.
- That's massive and out of the ground.
- Excellent running between the wickets.

CHALLENGE#2 COMMENTARY
(Contd.)

INPUT FORMAT

```
1    bowl_card_name shot_card_name shot_timing
```

INPUT SAMPLE

```
1    Bouncer Pull Late
```

OUTPUT FORMAT*

```
1    suitable_commentary shot_outcome
```

OUTPUT SAMPLE

```
1    Edged And Taken - 0 Runs
```

*These outcomes will be based on the outcome chart.

CHALLENGE#3 SUPER OVER

Predict the match outcome for the super over and print bowl-by-bowl commentary.

We keep wondering what if our match comes to standstill with a tie. Cue Entry, the Super Over.

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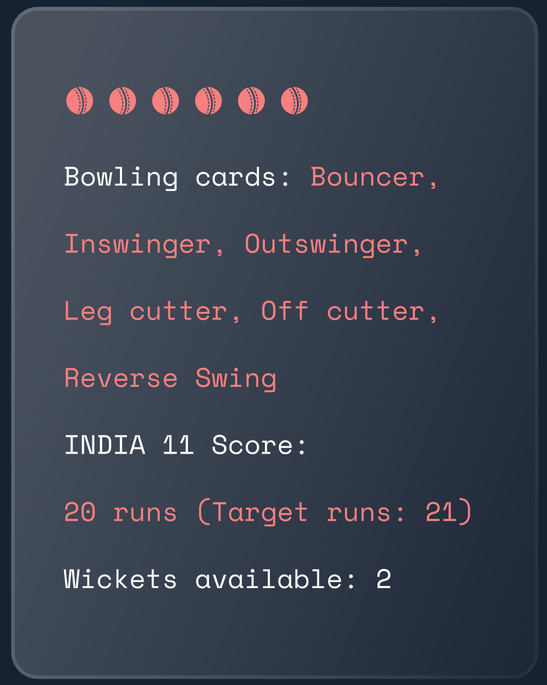
6 BALLS 2 WICKETS

FIRST INNINGS OVER - AUSTRALIA 11 HAS TO CHASE THE TARGET

Define the playable target runs, **6** random bowling cards and 2 wickets before taking inputs (example showcased beside). For the challenge, you have to print the commentary for each bowl (based on the shot outcome) and match results (win/loss).



CHALLENGE#3 SUPER OVER
(Contd.)

INPUT FORMAT

```
shot_name1 shot_timing1
shot_name2 shot_timing2
...
...
...
shot_name6 shot_timing6
```

INPUT SAMPLE

```
Straight Perfect
Flick Early
Hook Good
LegGlance Good
LongOff Late
LongOn Perfect
```

Note: If two wickets fall down, then the match is over. Show the win/loss output.

CHALLENGE#3 SUPER OVER
(Contd.)

OUTPUT FORMAT

```
1   Sudhakar bowled bowl_name ball,
    Craig played shot_timing shot_name
    suitable_commentary - shot_outcome
2   ...
3   ...
4   AUSTRALIA scored: xx runs
5   AUSTRALIA won/lost by x wickets/y runs
```

OUTPUT SAMPLE

```
1   Sudhakar bowled Bouncer ball,
    Craig played Perfect Straight shot
    Excellent line and length - 1 run
2   ...
3   ...
4   AUSTRALIA scored: 22 runs/18 runs
5   AUSTRALIA won by 1 wicket/lost by 2 runs
```