Strike Rate Calculation

In cricket, the **strike rate** is the average number of runs a batsman scores per 100 balls. Your task is to calculate the final strike rate for each batsman based on a CSV file containing data for multiple batsmen.

Input Format

A CSV file where each row contains:

- `name`: Name of the batsman
- `runs`: Runs scored by the batsman
- `balls`: Number of balls faced by the batsman

Example CSV Structure:

```
xyz,100,100
xyz,10,10
abc,30,10
abc,20,5
abc,10,42
def,50,25
def,70,30
xyz,40,20
abc,15,8
ghi,25,12
```

Strike Rate Formula

The strike rate is calculated as:

```
Strike Rate = (runs / balls) * 100
```

If the number of balls is `0`, then the local strike rate is `0`.

Mapper Output

The mapper should produce output in the format:

```
name, local_strike_rate
```

Where `local_strike_rate` is rounded to 3 decimal places.

Reducer Task

- **Calculate the average strike rate** for each batsman across all matches.
- The average strike rate should be the sum of all local strike rates divided by the total number of matches.
- Round off the final average strike rate to **three decimal places**.

Output Format

A CSV file where each row contains:

- `name`: Name of the batsman
- `average_strike_rate`: The average strike rate of the batsman across all matches.

Example Output:

```
abc,227.827
def,216.665
ghi,208.333
xyz,133.333
```

Notes

- Round all values to **3 decimals** in both mapper and reducer stages.
- Ensure that the final output is **rounded off** and **not formatted**.

Regards,

Big Data TA Team