

Key takeaways: don't stop worrying, but love atomic()

Don't use floats.

Don't use round(), if you must, always account for the remainder.

Don't execute non thread-safe writes in a parallel environment.

Use Decimal instead of float, and Decimal.quantize() instead of round() :

```
Decimal('0.35') + Decimal('100.15')
```

Lock dependent rows during transactions:

```
with transaction.atomic():  
    players = Player.objects.filter(user=user).select_for_update()  
    user.balance = player_balance_sum(players)  
    user.save()
```

Use atomic compare-and-swap operations when you cant lock:

```
User.objects.filter(id=user.id, balance__gt=50)\  
    .update(balance=F('balance') - 50)`
```



Q&A

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Final Disclaimer: I'm not qualified to tell you how to
design your distributed system. Get a professional for that.

I can only show you challenges and solutions I've discovered in my personal
adventures with Django. Please let me know if you have corrections!

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