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GraphQL

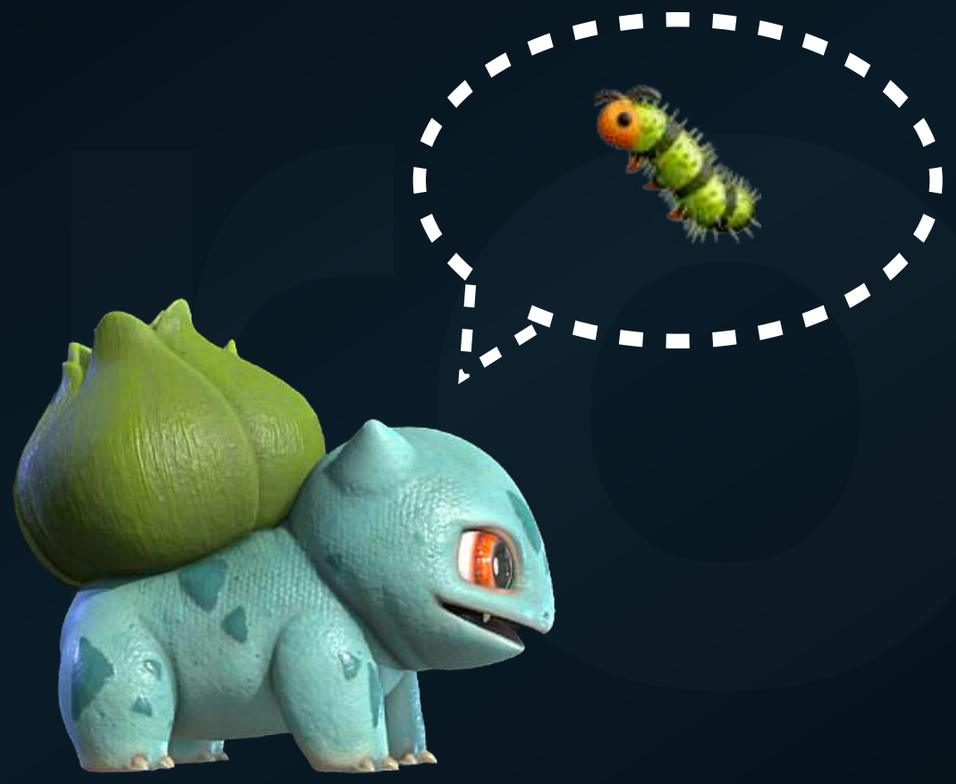
A visual introduction

Manish Poduval

What is it ?

A Query Language

In simple terms, it is a way of fetching only the data that you need from the server.



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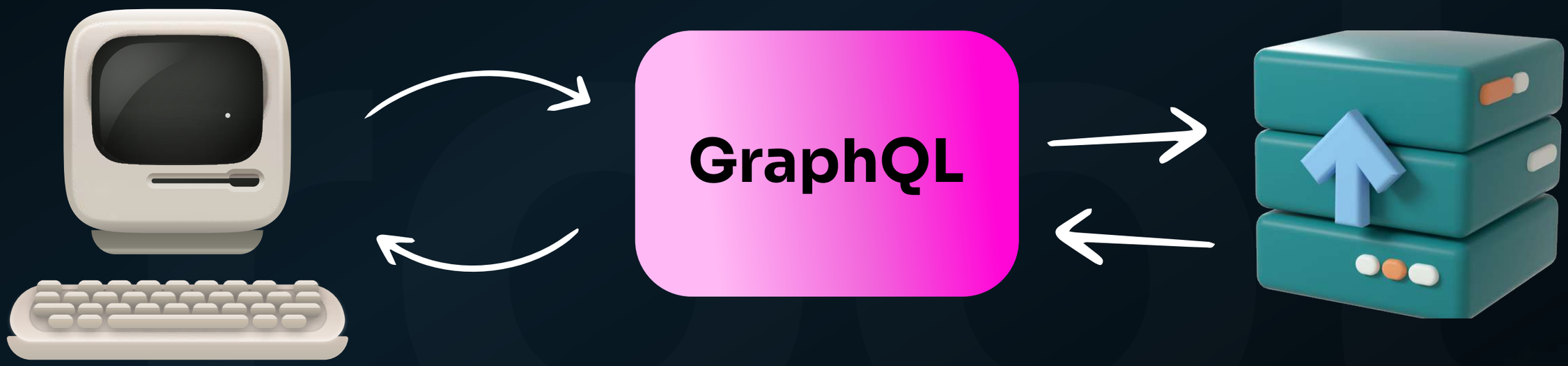
Techincally it's an API standard/specification and can be implemented irrespective of the tech stack

Check the specs at
specs.graphql.org

Visualizing it, you could see it as this way.



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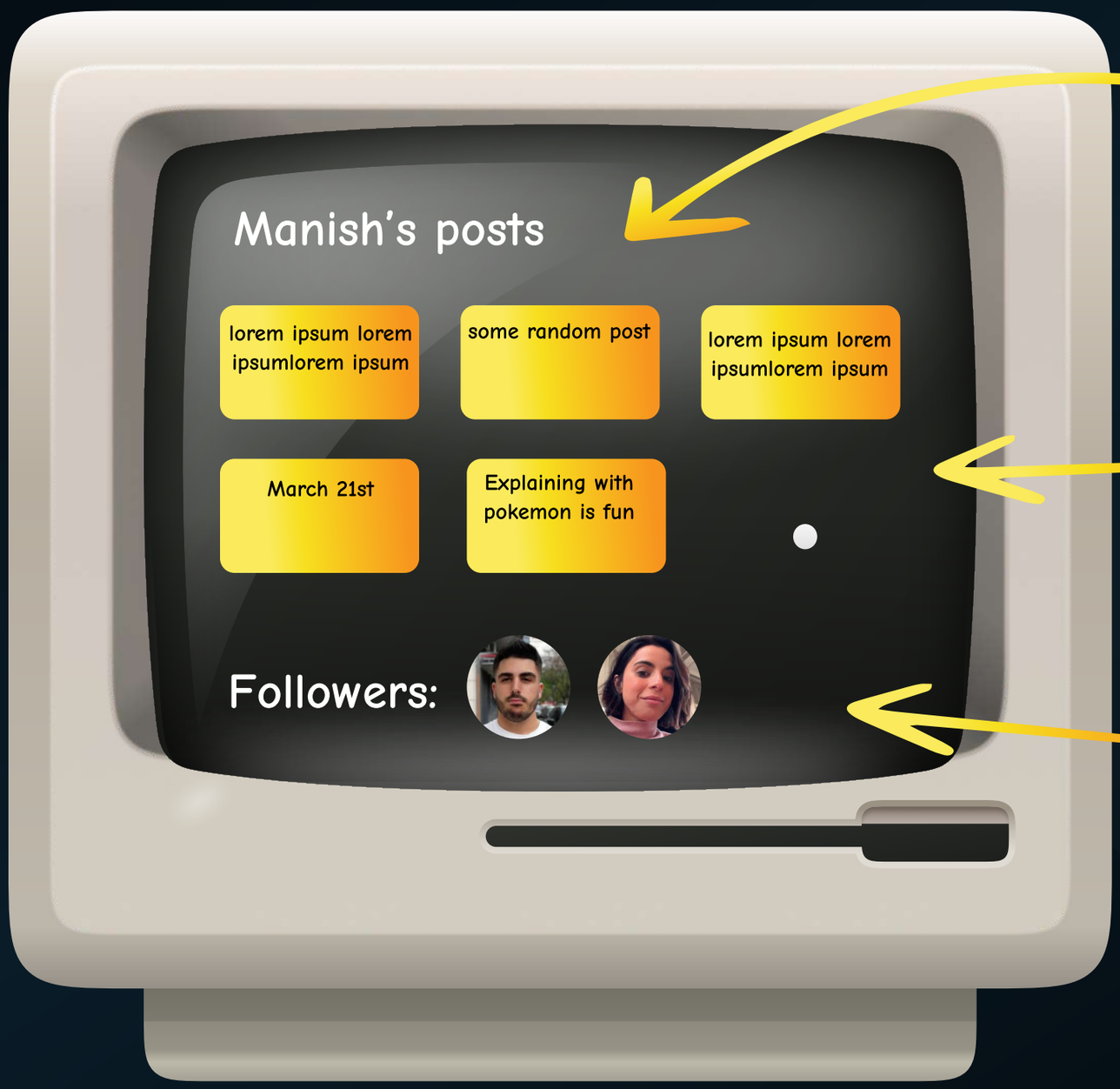
How is it better than REST API's

Well, let's say you're building a blogging website

Assume you're using 3 APIs to get data



An API to fetch user details with extra info

API to fetch posts

API to fetch followers details

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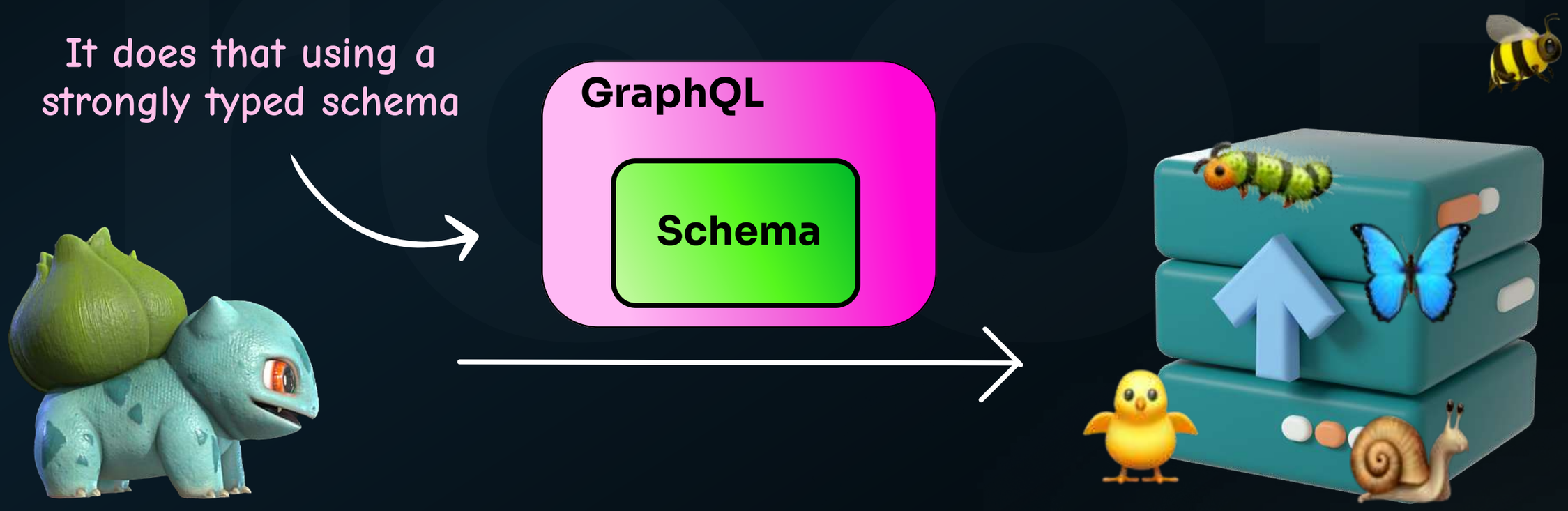
with GraphQL you'd only need 1

How only a single endpoint ?

It does that using a strongly typed schema



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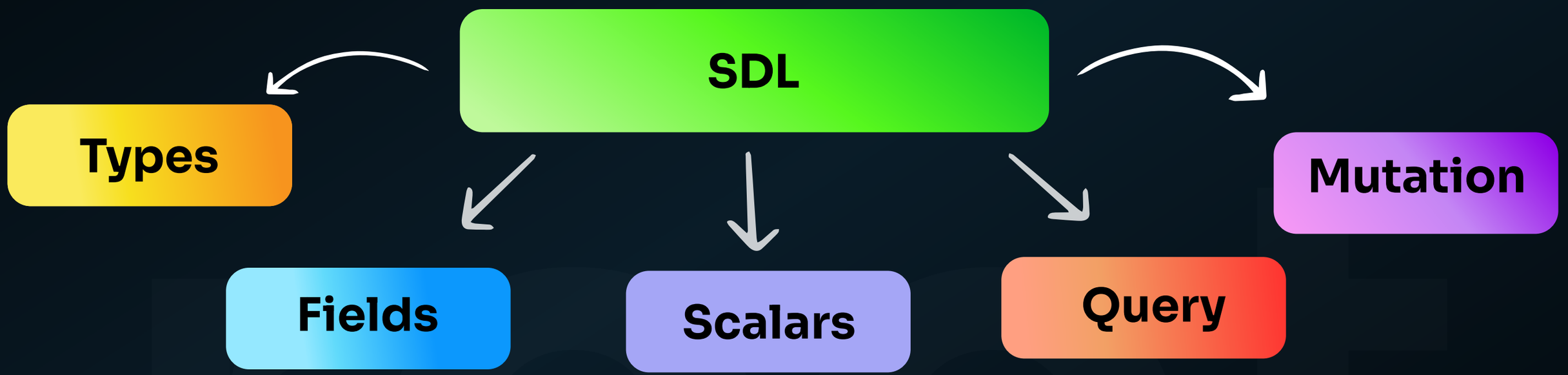
The Schema Definition Language (SDL)

The SDL consists of a few basic parts. With the SDL we can create our schema.
A schema defines the shape of our data



A simple “Worm” schema using Types and Fields

```
type Worm {
  id: ID
  name: String
}
```

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Thinking in graphs . . .

You can also establish relations between types

```
type Worm {
  id: ID
  name: String
  loc: [Home]

}
```

```
type Home {
  id: ID
  title: String
}
```

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There are two operations you can do

Queries

They are used to retrieve data

```
{
    worms {
        names
    }
}
```

Fetches the names from a worms list API

Mutations

They are used to create. update or delete data

```
mutation {
 createWorm(legs: “7”)
}
```

Would create a worm entry

- There is also “Subscriptions”. (Topic for another day)

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You get the picture right ?

Our query

```
{
    worm(color: “green”) {
        body
    }
}
```

GraphQL

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GraphQL has it's benefits

Can be used in any tech stack

No over-fetching or under-fecthing data

Tailored requests

Suitable for smaller networks

GraphQL

Strongly typed

API growth without versioning

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