

IS442: Object Oriented Programming

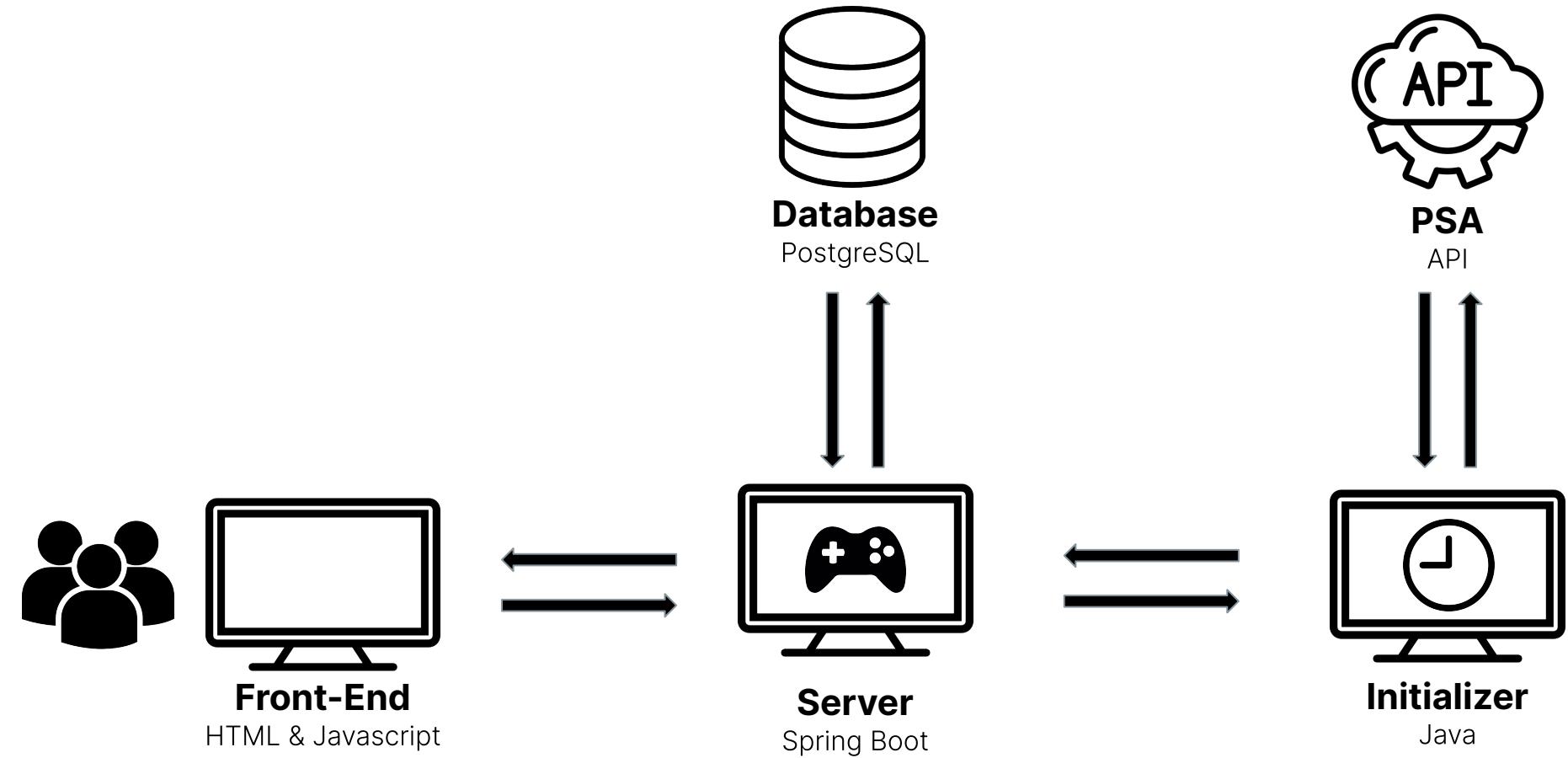
Project Demonstration

G1T6

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- Tan Qiu Long Matthew Ian

1. Project Explanation

Client-Server Architecture Diagram



External Libraries Used

Name	Purpose
Spring Boot Frameworks	Avoid writing of boilerplate code, annotations and XML configurations. Utilisation of the benefits from the Spring ecosystem.
Postgresql & JDBC	To be able to make connections with our Postgresql backend
Google Guava	Guava's multi-mapping functionality allows for an easier implementation of the PUT function
Google Gson	To easily parse through the JSON string returned by the PSA API upon calling it

External Libraries Used

Name	Purpose
Hibernate	Entity mapping, auto-creation of tables in the DB. JPA syntax to interact with the DB
JSON-Java(org.json)	Create, manipulate and parse JSON received from initializer into JSONObject and JSONArray
Javamail	Allow Spring Boot application to send email to users
Jackson	Convert JSON object to POJO

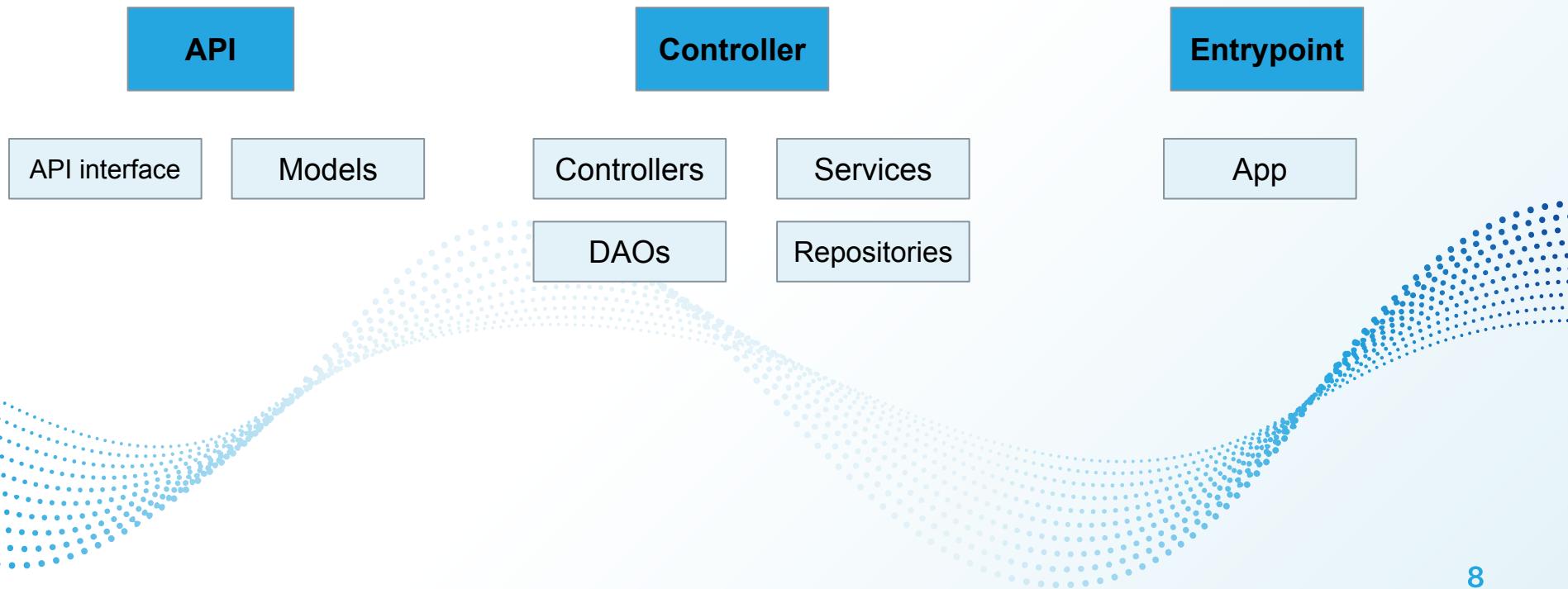
Libraries Considered

Name	Purpose
MongoDB	Non-relational, no schema JSON DB.
JdbcTemplate	SQL statements to interact with the DB.
Flyway DB	DB migration.
Apache Commons Collections	Commons Collections augments Java Collections Framework.
Keycloak	Secures the API by enabling authorisation for API calls.

Design Principles

Name	Purpose
Model, View, Controller (MVC)	Decouples the program logic into 3 interconnected layers.
Singleton (@Bean, @AutoWired)	Ensures that only 1 instance of a class exists in JVM at any one time.
Data Transfer Object (DTO)	Serialisation and deserialisation mechanisms; A means for data transport.
Modularity	To allow for maintainability, extensibility and reusability of the code.

Backend Package Structure



2. Project Demonstration

Thanks!

Any questions?



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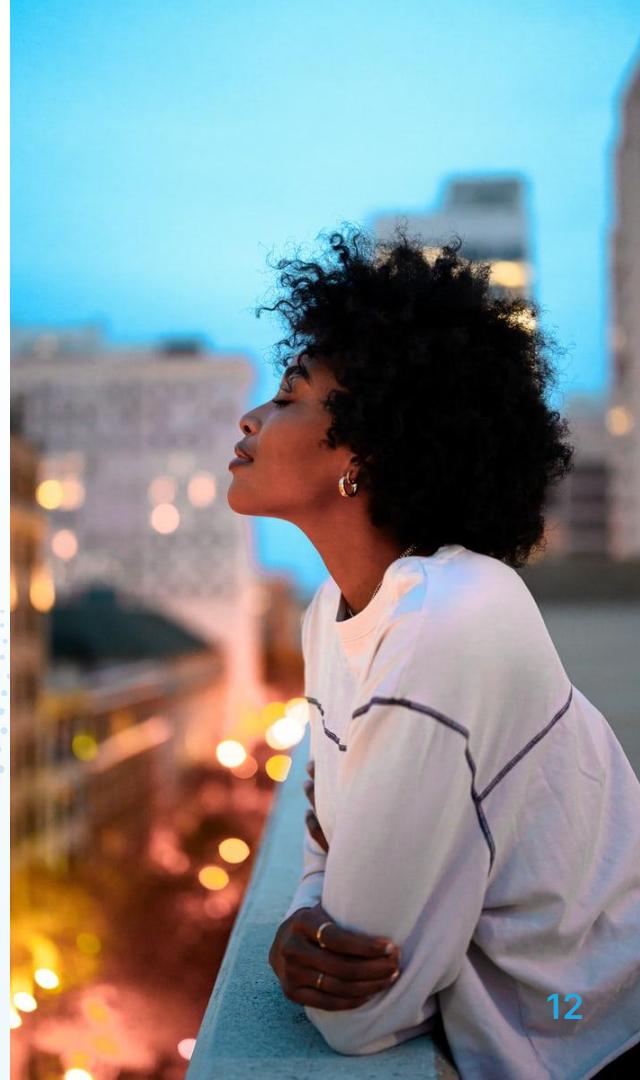
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1. Transition Headline

Let's start with the first set of slides

“

**Quotations are commonly
printed as a means of
inspiration and to invoke
philosophical thoughts from
the reader.**

This is a slide title

- Here you have a list of items
- And some text
- But remember not to overload your slides with content

Your audience will listen to you or read the content, but won't do both.

Big concept

Bring the attention of your audience over a key concept using icons or illustrations



You can also split your content

White

Is the color of milk and fresh snow, the color produced by the combination of all the colors of the visible spectrum.

Black

Is the color of ebony and of outer space. It has been the symbolic color of elegance, solemnity and authority.

In two or three columns

Yellow

Is the color of gold, butter and ripe lemons. In the spectrum of visible light, yellow is found between green and orange.

Blue

Is the colour of the clear sky and the deep sea. It is located between violet and green on the optical spectrum.

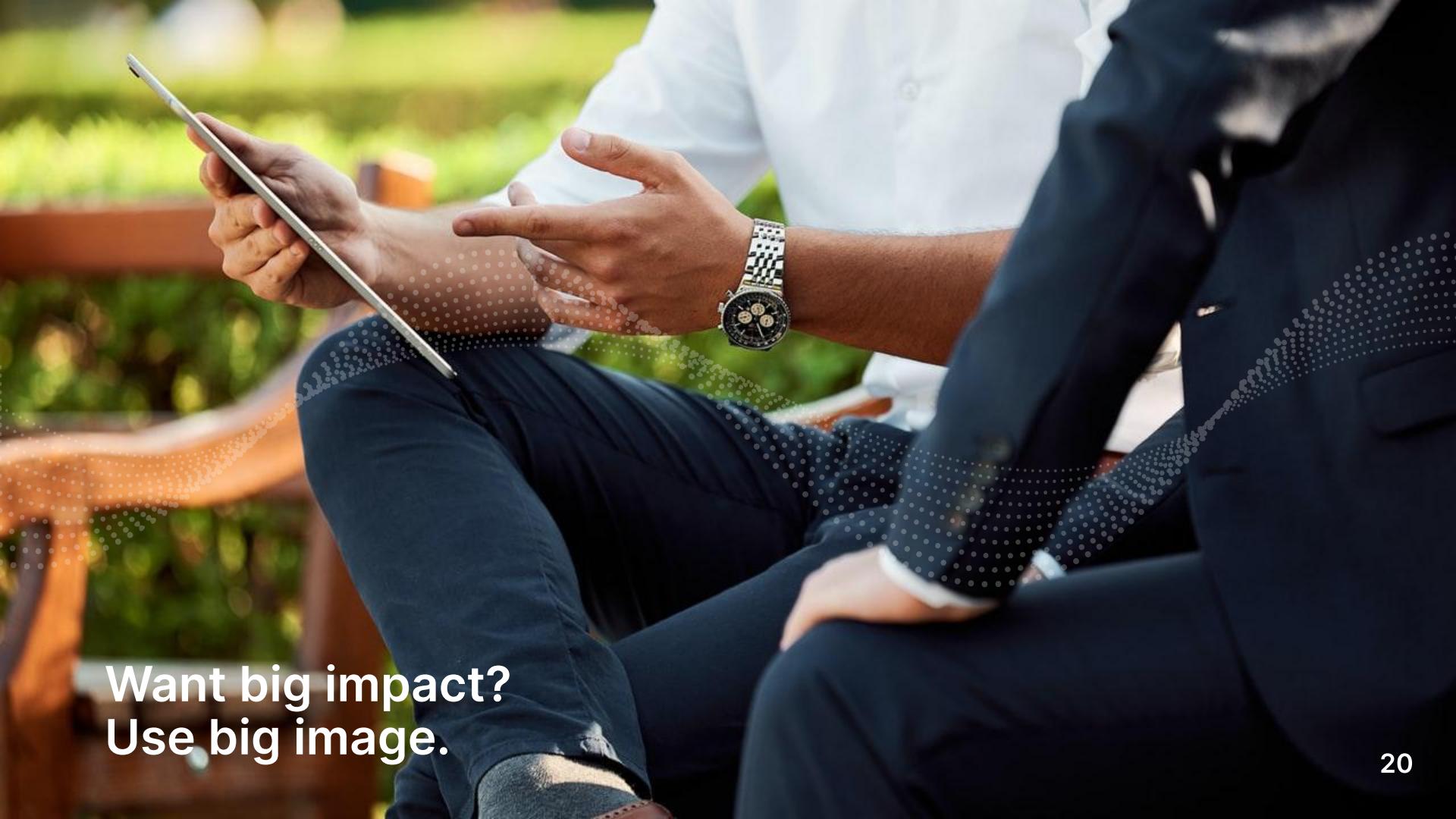
Red

Is the color of blood, and because of this it has historically been associated with sacrifice, danger and courage.

A picture is worth a thousand words

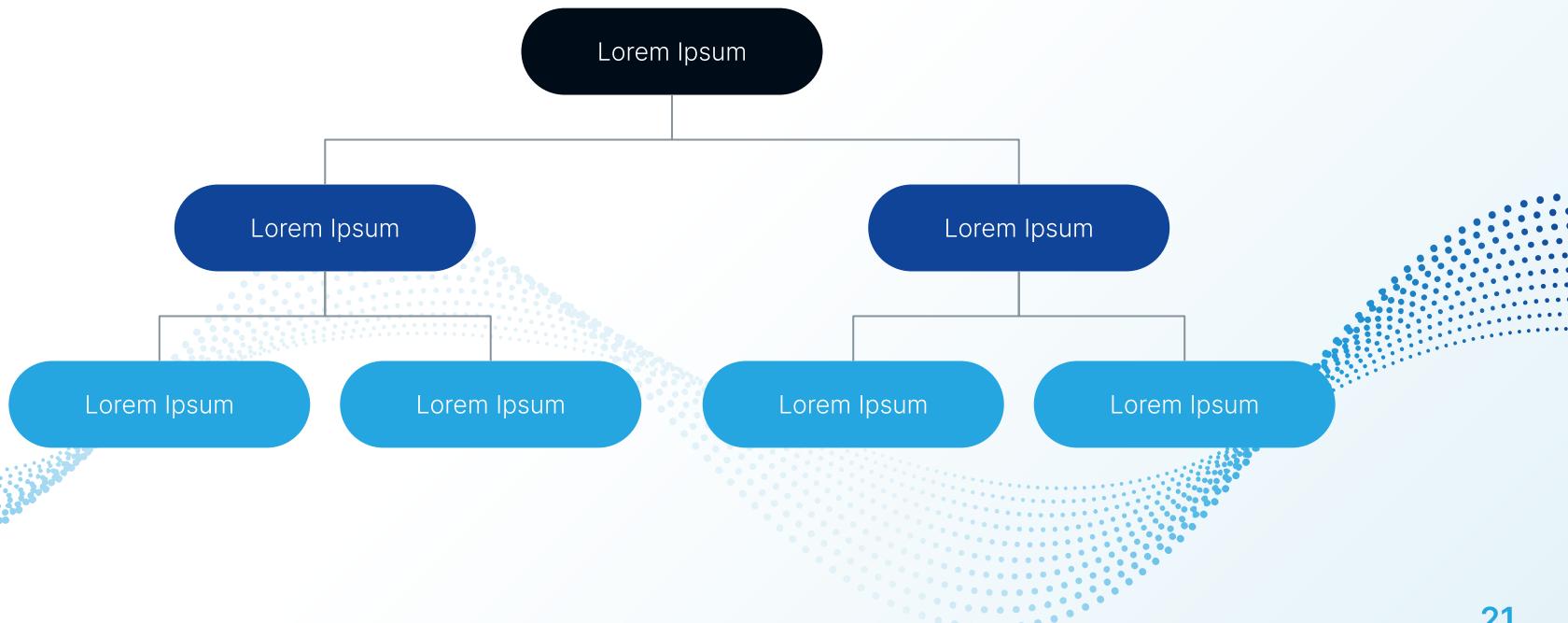
A complex idea can be conveyed with just a single still image, namely making it possible to absorb large amounts of data quickly.





Want big impact?
Use big image.

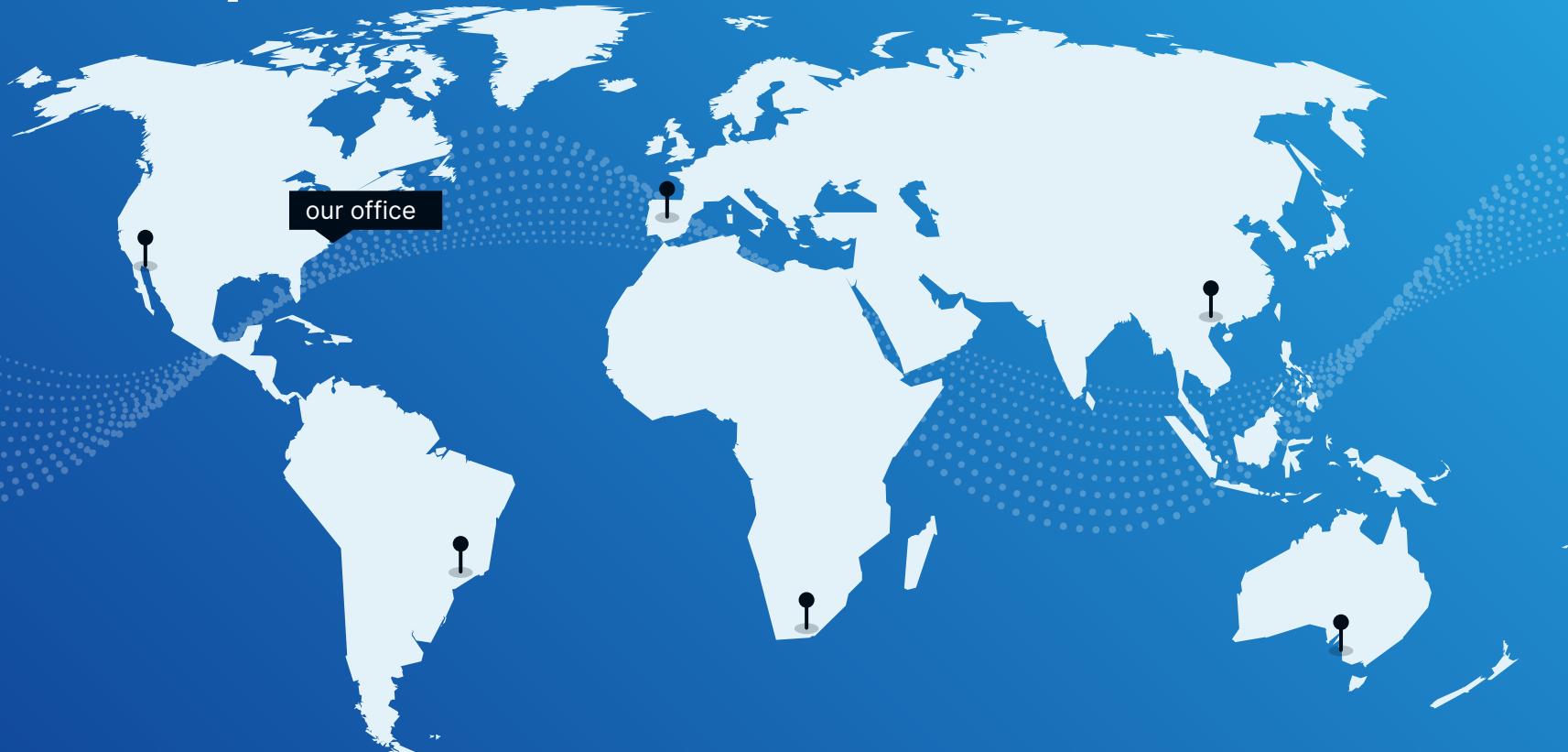
Use diagrams to explain your ideas



And tables to compare data

	A	B	C
Yellow	10	20	7
Blue	30	15	10
Orange	5	24	16

Maps



89,526,124

Whoa! That's a big number, aren't you proud?

89,526,124\$

That's a lot of money

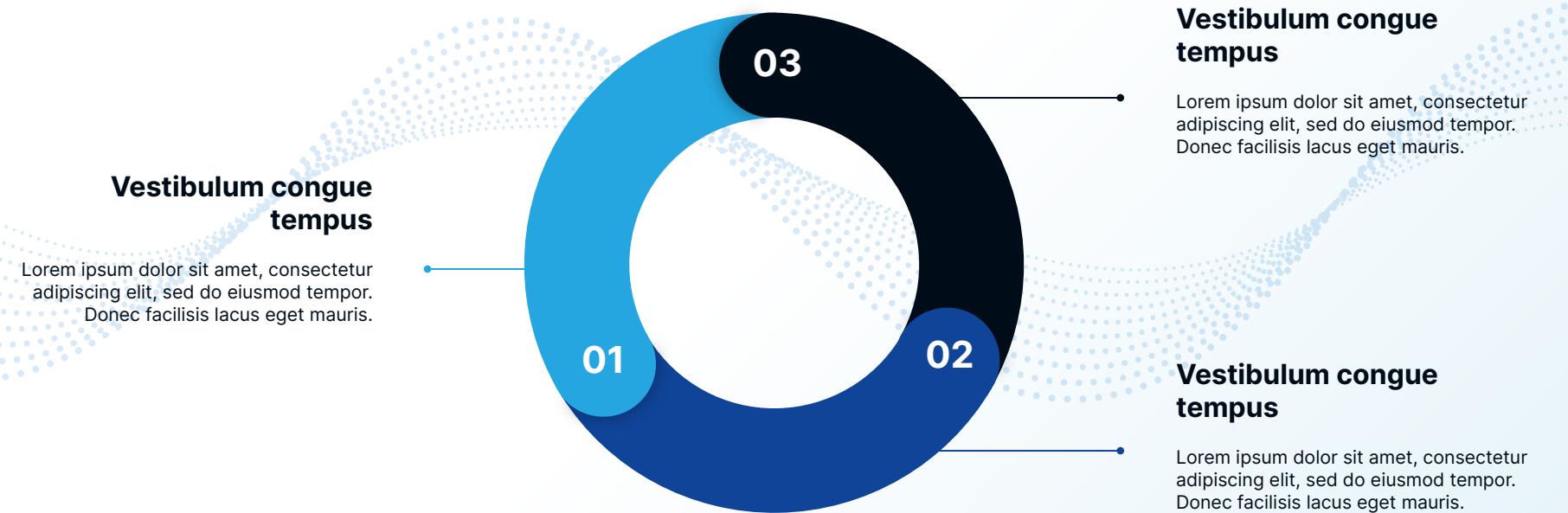
185,244 users

And a lot of users

100%

Total success!

Our process is easy



Let's review some concepts

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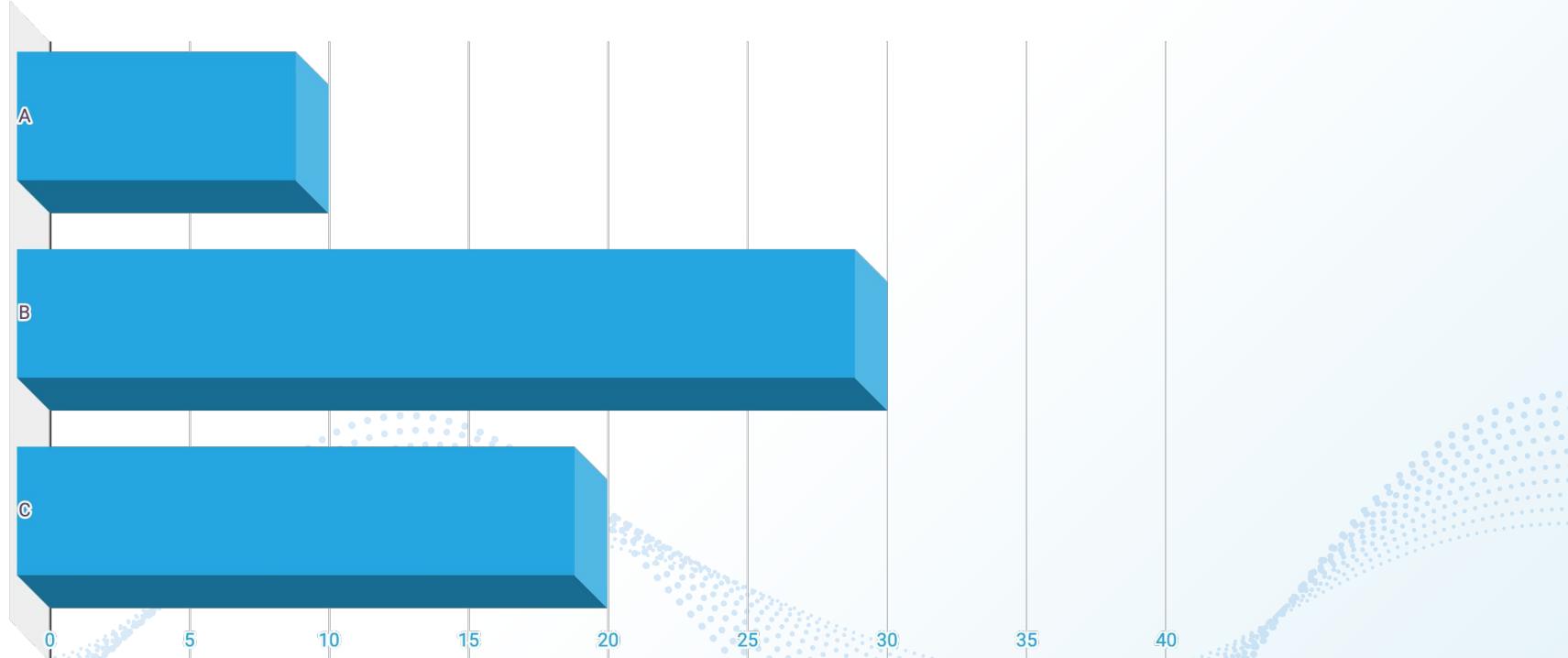
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Red

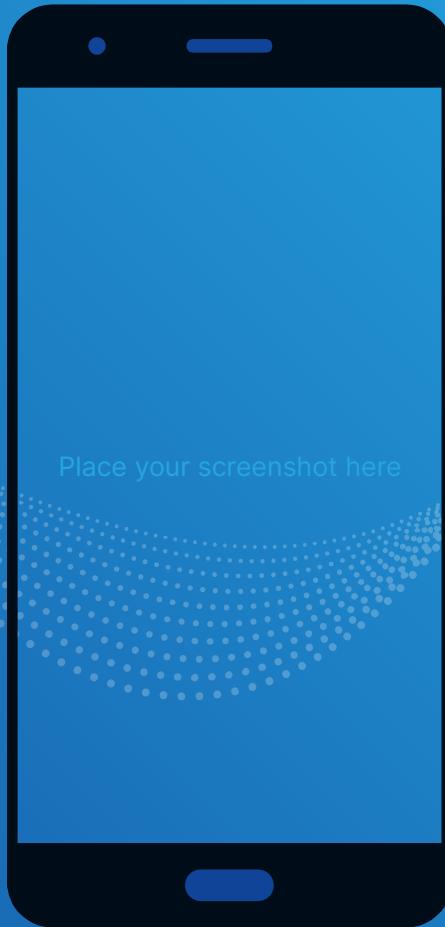
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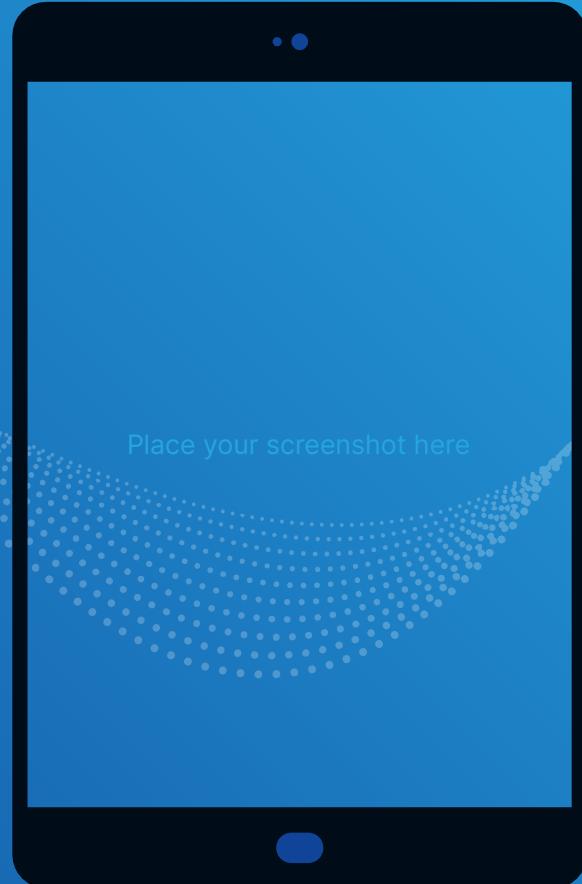
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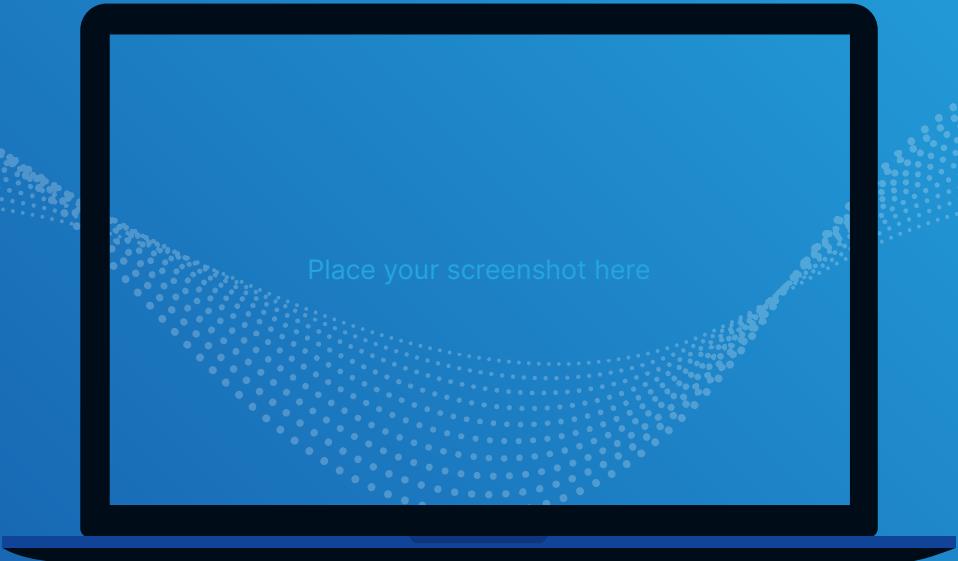
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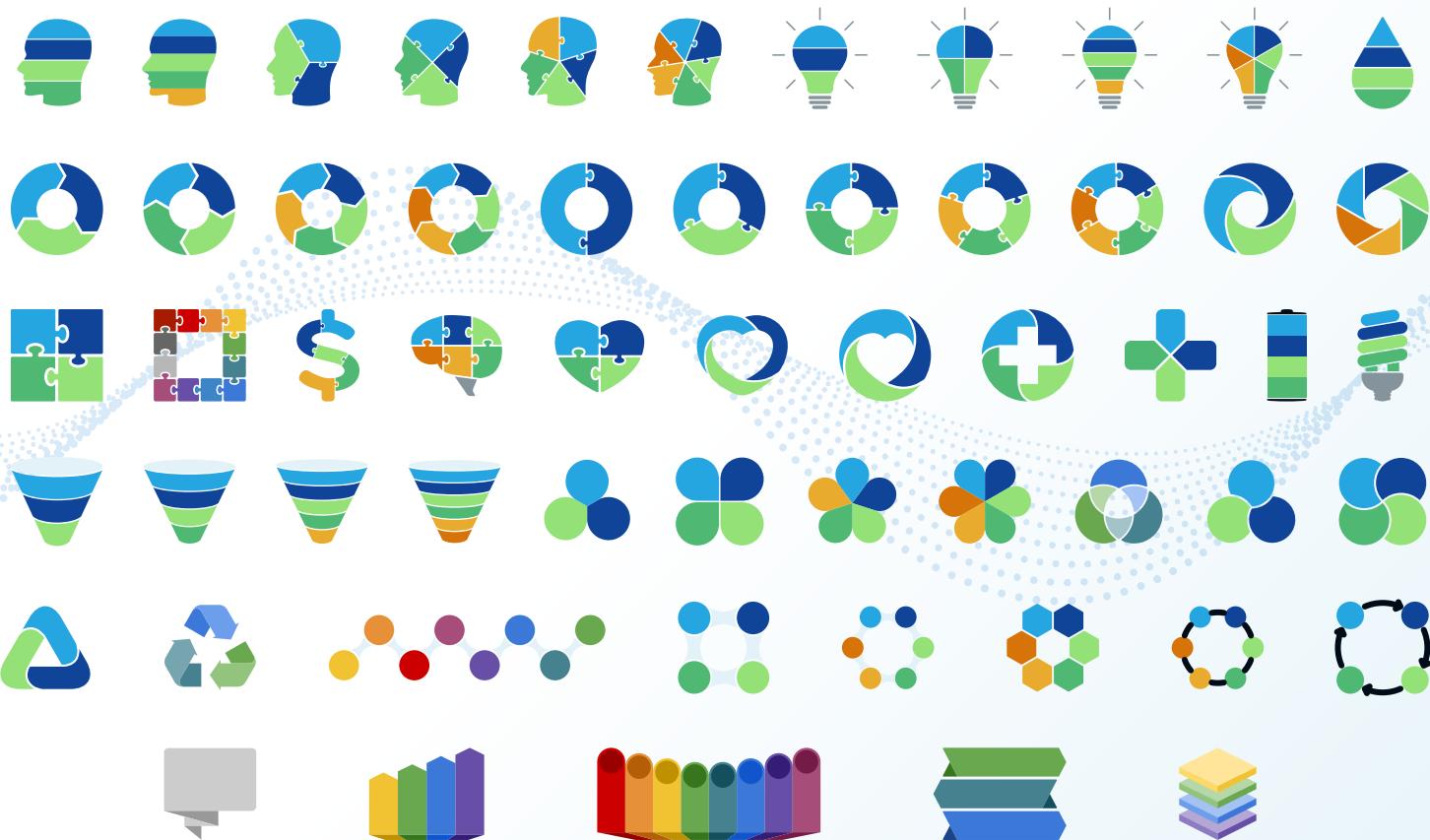
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