

# Technical Design Template



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@Alex Kugell I think we can put the new one as the template here

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## About Technical Design

At Trio, we really value and enjoy thinking through a problem before writing code. The way we do this is by writing a technical design that outlines a blueprint for implementation. We also find that this helps us become better software engineers over time!

Technical designs also have a secret benefit. They help you to express yourself in a clear way! Over time, as you write more and more of these documents, you'll become much better at communicating your technical ideas and opinions, which is essential for collaborating effectively with your team.

## Background

Describe the background of the Technical Design and the objective of this document.

## Technical Approaches

Sometimes we face different possible approaches to cover the same requirement. When you face this kind of situation, **create the Technical Approaches** document. It's important to not skip it because most times the best and most reasonable approach is not the first one that comes to our minds.

The approaches should be listed. You can have any Technical Approaches documents as you need, they only need to be split by topics.

## Technical Design

# Topic #1

Structure your solution with topics. Feel free to organize your ideas. We know it's not simple as you think, but try your best! This part should avoid a meeting!

*Pro tip: Feel free to create any topics as you want to.*

## Example of a Topic

- **Background:** It's warm when you read a document that explains the context explaining why that document exists. Technical Designs exist because we are trying to solve or create something. Try to explain to your reader the reason and objectives that this Technical Design tries to reach.
- **Classes and new objects:** Defining the objects that you will deal with, how and why it's a good start.
  - Examples:
    - **MySQLRepository**
      - This class will be a singleton
      - It's going to connect to MySQL
      - It's possible to operate CRUD events with this class through these methods:
        - `query` : it executes a SQL Query
    - **Authenticator**
      - This class will authenticate the user
      - It will be a middleware on express

- **Database:** Describing the schemas or tables that your solution will deal with it's a good start.

- Examples:

- **users**

- This table will store the users
    - It will have the following fields:
      - `id : INT(11) PK` (PK = primary key)
      - `name : VARCHAR(50)`
      - `email : VARCHAR(50)`
      - `created_at : DATETIME`

- **orders**

- This table will store the orders from users
    - It will have the following fields:
      - `id : INT(11) PK` (PK = primary key)
      - `user_id : INT(11) FK (users.id)` (FK = foreign key)
      - `amount : FLOAT(15, 2)`

- Of course, the examples above would be better presented in a table. That's why we say: feel free to create the best experience for your reader! This Technical Design should save time by avoiding a meeting.

Example using tables on Google Docs:

## Tables