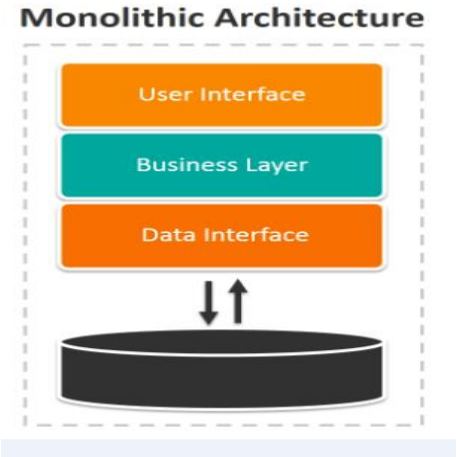
Monolithic Architecture

First of all Software Architectural patterns are used to view the image of the system. It also addresses various issues in software engineering such as performance limitation, availability, business risk.

There are various types of Architectural patterns:

- Monolithic architecture,
- Microservice architecture,
- Layered architecture

Monolithic Application describes a single-tiered software application in which different components combined into a single program.



Let's consider an example of Ecommerce application that authorizes customer, takes an order, check inventory, authorizes payment and delivers ordered products. This application consists of various components including User Interface for customers along with backend services to check products, charge payments and shipping orders.

Despite having different components, the application is built as one for all platforms such as desktop, mobile, tablet using RDBMS as a data source.

Benefits:

It is simple to develop a project with Monolithic Architecture and also simple to test by launching the application and testing the User Interface.

In the early stages of the project it works well and most of the big and successful applications which exit today were started as monolith.

Drawbacks:

As the application is too large and complex, it is challenging to make changes fast and correct.

Monolithic applications have difficulty in adopting new and advance technologies. Any changes in language or framework affect an entire application.

It requires more effort and time to thoroughly work with app details.

Size of application can slow down the start-up time and bug in any module can easily bring down the entire process.

As this architecture has various drawbacks, other new approaches such microservice architecture in which large application is divided into multiple microservices.

Instead of sharing a single database as in Monolithic Application, each microservice has its own database.