What is Monolithic Architecture?

In this lesson, we will discuss monolithic architecture.

We'll cover the following

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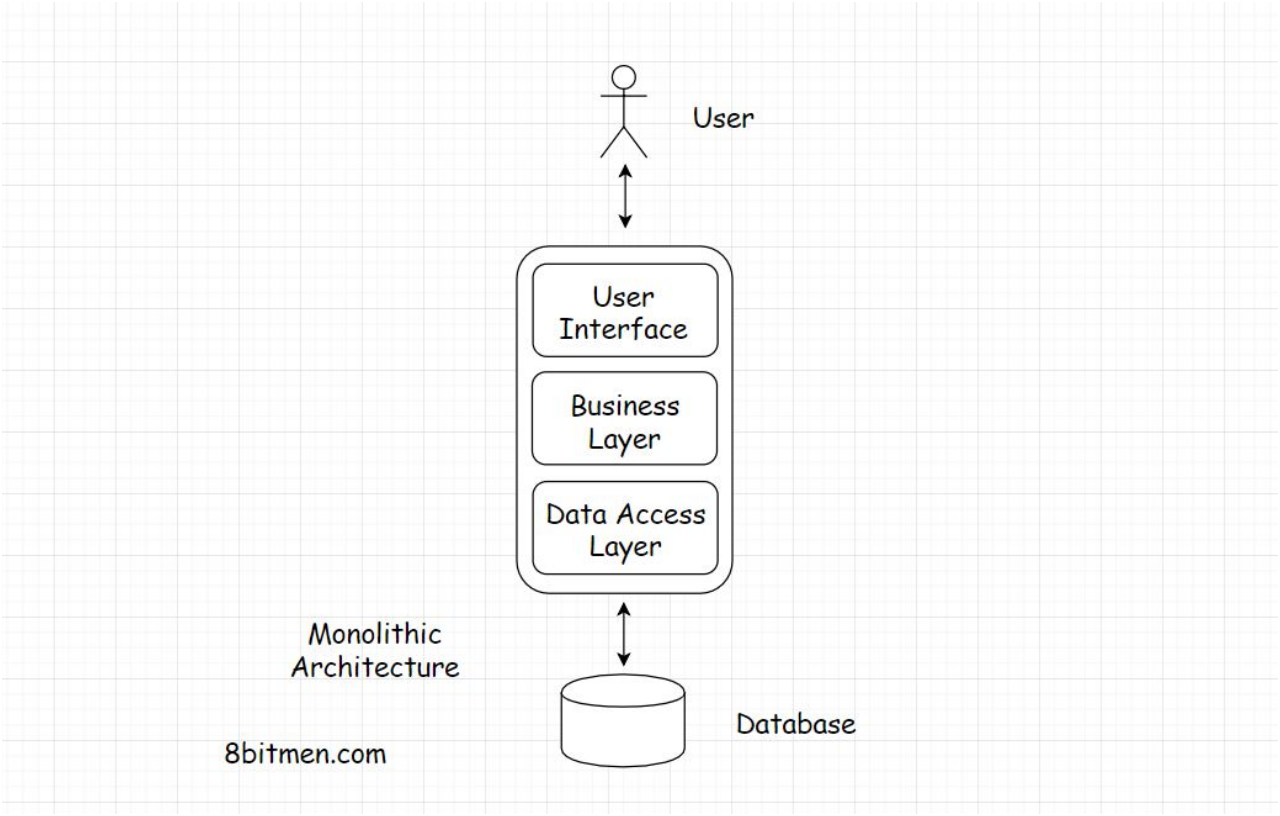
> An application has a monolithic architecture if it contains the entire application code in a single codebase.

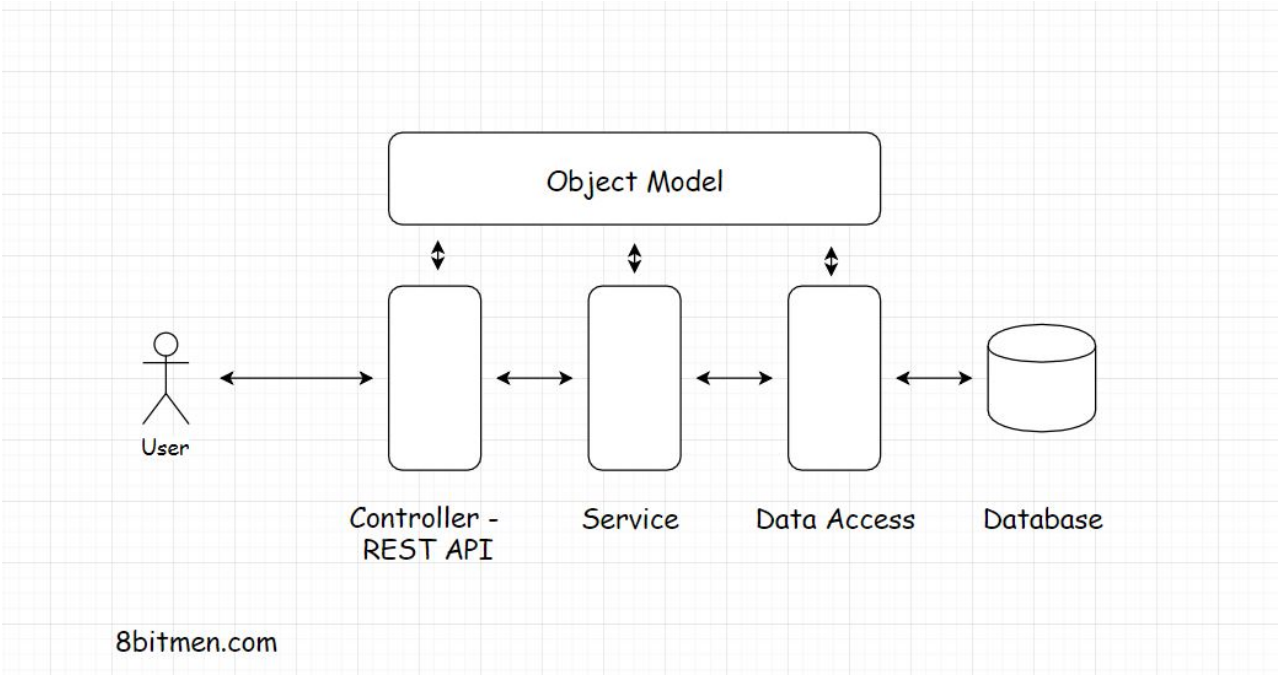
A monolithic application is a self-contained, single-tiered software application. This is unlike the microservices architecture, where different modules are responsible for running respective tasks and features of an app.

The diagram below represents a monolithic architecture:



In a monolithic web app, all the different layers of the app, UI, business, data access, etc., are in the same codebase.

After the *controller*, we have the *Service Layer interface* and *Class* implementations of the interface. The *business logic* goes in the *Object Domain model*, and a bit also goes into the Service, Business, and *Repository/DAO [Data Access Object]* classes.



Monolithic apps are simple to build, test, and deploy compared to a microservices architecture.

There are times during the initial stages of a business when teams chose to move forward with a monolithic architecture, intending to branch out into a distributed, microservices architecture later.

Well, this decision has several trade-offs, and there is no standard solution to this.

In the present computing landscape, applications are being built and deployed on the cloud. A wise decision would be to pick the loosely coupled stateless microservices architecture from the start if you expect things to grow at a significant pace in the future.

Because re-writing stuff has its costs, stripping down things in a tightly coupled architecture and re-writing stuff demands a lot of resources and time.

On the flip side, if your requirements are simple, why bother writing a microservices architecture? Running different modules in conjunction with each other isn't a walk in the park.

Let's go through some of the pros and cons of monolithic architecture.

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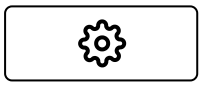
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