[](https://ida.interchain.io/)

[Interchain Developer Academy](https://ida.interchain.io/)/[Interchain Developer Academy](https://ida.interchain.io/ida-course/LPs/week-0/)



Search

[Interchain Developer Academy](https://ida.interchain.io/)[Interchain Developer Academy](https://ida.interchain.io/ida-course/LPs/week-0/)

Search



Filters

Interchain Developer Academy

[](https://ida.interchain.io/ida-course/LPs/week-0/)

[Week 0 - Getting Started](https://ida.interchain.io/ida-course/LPs/week-0/)

[Getting Started](https://ida.interchain.io/ida-course/LPs/week-0/)

[Blockchain 101](https://ida.interchain.io/ida-course/LPs/week-0/)

[Blockchain History](https://ida.interchain.io/ida-course/LPs/week-0/)

[Public and Managed Blockchains](https://ida.interchain.io/ida-course/LPs/week-0/)

[Consensus in Distributed Networks](https://ida.interchain.io/ida-course/LPs/week-0/)

[Cryptography](https://ida.interchain.io/ida-course/LPs/week-0/)

[Self-Assessment Quiz](https://ida.interchain.io/ida-course/LPs/week-0/)

[Go Introduction - First Steps](https://ida.interchain.io/ida-course/LPs/week-0/)

[Go Basics](https://ida.interchain.io/ida-course/LPs/week-0/)

[Go Interfaces](https://ida.interchain.io/ida-course/LPs/week-0/)

[Control Structures in Go](https://ida.interchain.io/ida-course/LPs/week-0/)

[Arrays and Slices in Go](https://ida.interchain.io/ida-course/LPs/week-0/)

[Standard Packages in Go](https://ida.interchain.io/ida-course/LPs/week-0/)

[Concurrency in Go](https://ida.interchain.io/ida-course/LPs/week-0/)

[Good-To-Know Dev Terms](https://ida.interchain.io/ida-course/LPs/week-0/)

[Docker Introduction](https://ida.interchain.io/ida-course/LPs/week-0/)

[](https://ida.interchain.io/ida-course/LPs/week-0/)

[Week 1 - Introduction to the Interchain](https://ida.interchain.io/ida-course/LPs/week-0/)

[Introduction to the Interchain](https://ida.interchain.io/ida-course/LPs/week-0/)

[Blockchain Technology and the Interchain](https://ida.interchain.io/ida-course/LPs/week-0/)

[The Interchain Ecosystem](https://ida.interchain.io/ida-course/LPs/week-0/)

[Getting ATOM and Staking It](https://ida.interchain.io/ida-course/LPs/week-0/)

[A Blockchain App Architecture](https://ida.interchain.io/ida-course/LPs/week-0/)

[Accounts](https://ida.interchain.io/ida-course/LPs/week-0/)

[Transactions](https://ida.interchain.io/ida-course/LPs/week-0/)

[Messages](https://ida.interchain.io/ida-course/LPs/week-0/)

[Modules](https://ida.interchain.io/ida-course/LPs/week-0/)

[Protobuf](https://ida.interchain.io/ida-course/LPs/week-0/)

[Multistore and Keepers](https://ida.interchain.io/ida-course/LPs/week-0/)

[BaseApp](https://ida.interchain.io/ida-course/LPs/week-0/)

[Queries](https://ida.interchain.io/ida-course/LPs/week-0/)

[Events](https://ida.interchain.io/ida-course/LPs/week-0/)

[Context](https://ida.interchain.io/ida-course/LPs/week-0/)

[Testing](https://ida.interchain.io/ida-course/LPs/week-0/)

[Relaying with IBC](https://ida.interchain.io/ida-course/LPs/week-0/)

[Interchain Security](https://ida.interchain.io/ida-course/LPs/week-0/)

[Bridges](https://ida.interchain.io/ida-course/LPs/week-0/)

[Migrations](https://ida.interchain.io/ida-course/LPs/week-0/)

[Week 1 Quiz](https://ida.interchain.io/ida-course/LPs/week-0/)

[](https://ida.interchain.io/ida-course/LPs/week-0/)

[Week 2 - First Steps](https://ida.interchain.io/ida-course/LPs/week-0/)

[First Steps](https://ida.interchain.io/ida-course/LPs/week-0/)

[Setup Your Work Environment](https://ida.interchain.io/ida-course/LPs/week-0/)

[Run a Node, API, and CLI](https://ida.interchain.io/ida-course/LPs/week-0/)

[Ignite CLI](https://ida.interchain.io/ida-course/LPs/week-0/)

[Exercise - Make a Checkers Blockchain](https://ida.interchain.io/ida-course/LPs/week-0/)

[Store Object](https://ida.interchain.io/ida-course/LPs/week-0/)

[Create Custom Messages](https://ida.interchain.io/ida-course/LPs/week-0/)

[Create and Save a Game Properly](https://ida.interchain.io/ida-course/LPs/week-0/)

[Add a Way to Make a Move](https://ida.interchain.io/ida-course/LPs/week-0/)

[Emit Game Information](https://ida.interchain.io/ida-course/LPs/week-0/)

[Record the Game Winner](https://ida.interchain.io/ida-course/LPs/week-0/)

[Week 2 Exercise](https://ida.interchain.io/ida-course/LPs/week-0/)

[](https://ida.interchain.io/ida-course/LPs/week-0/)

[Week 3 - Introduction to IBC and CosmJS](https://ida.interchain.io/ida-course/LPs/week-0/)

[Introduction to IBC and CosmJS](https://ida.interchain.io/ida-course/LPs/week-0/)

[What is IBC?](https://ida.interchain.io/ida-course/LPs/week-0/)

[IBC/TAO - Connections (OPTIONAL)](https://ida.interchain.io/ida-course/LPs/week-0/)

[IBC/TAO - Channels (OPTIONAL)](https://ida.interchain.io/ida-course/LPs/week-0/)

[IBC/TAO - Clients (OPTIONAL)](https://ida.interchain.io/ida-course/LPs/week-0/)

[IBC Token Transfer](https://ida.interchain.io/ida-course/LPs/week-0/)

[Interchain Accounts (OPTIONAL)](https://ida.interchain.io/ida-course/LPs/week-0/)

[IBC Middleware (OPTIONAL)](https://ida.interchain.io/ida-course/LPs/week-0/)

[Create a Custom IBC Middleware (OPTIONAL)](https://ida.interchain.io/ida-course/LPs/week-0/)

[Integrate IBC Middleware Into a Chain (OPTIONAL)](https://ida.interchain.io/ida-course/LPs/week-0/)

[IBC Tooling](https://ida.interchain.io/ida-course/LPs/week-0/)

[What is CosmJS?](https://ida.interchain.io/ida-course/LPs/week-0/)

[Your First CosmJS Actions](https://ida.interchain.io/ida-course/LPs/week-0/)

[Compose Complex Transactions](https://ida.interchain.io/ida-course/LPs/week-0/)

[Learn to Integrate Keplr](https://ida.interchain.io/ida-course/LPs/week-0/)

[Create Custom CosmJS Interfaces](https://ida.interchain.io/ida-course/LPs/week-0/)

[](https://ida.interchain.io/ida-course/LPs/week-0/)

[Week 4 - Ignite CLI and IBC Advanced](https://ida.interchain.io/ida-course/LPs/week-0/)

[Ignite CLI and IBC Advanced](https://ida.interchain.io/ida-course/LPs/week-0/)

[Keep an Up-To-Date Game Deadline](https://ida.interchain.io/ida-course/LPs/week-0/)

[Keep Track Of How Many Moves Have Been Played](https://ida.interchain.io/ida-course/LPs/week-0/)

[Put Your Games in Order](https://ida.interchain.io/ida-course/LPs/week-0/)

[Auto-Expiring Games](https://ida.interchain.io/ida-course/LPs/week-0/)

[Let Players Set a Wager](https://ida.interchain.io/ida-course/LPs/week-0/)

[Handle wager payments](https://ida.interchain.io/ida-course/LPs/week-0/)

[Integration tests](https://ida.interchain.io/ida-course/LPs/week-0/)

[Incentivize Players](https://ida.interchain.io/ida-course/LPs/week-0/)

[Help Find a Correct Move](https://ida.interchain.io/ida-course/LPs/week-0/)

[Play With Cross-Chain Tokens](https://ida.interchain.io/ida-course/LPs/week-0/)

[Understand IBC Denoms](https://ida.interchain.io/ida-course/LPs/week-0/)

[Go Relayer](https://ida.interchain.io/ida-course/LPs/week-0/)

[Hermes Relayer](https://ida.interchain.io/ida-course/LPs/week-0/)

[](https://ida.interchain.io/ida-course/LPs/week-0/)

[Week 5 - CosmJS Advanced](https://ida.interchain.io/ida-course/LPs/week-0/)

[CosmJS Advanced](https://ida.interchain.io/ida-course/LPs/week-0/)

[Create Custom Objects](https://ida.interchain.io/ida-course/LPs/week-0/)

[Create Custom Messages](https://ida.interchain.io/ida-course/LPs/week-0/)

[Get an External GUI](https://ida.interchain.io/ida-course/LPs/week-0/)

[Integrate CosmJS and Keplr](https://ida.interchain.io/ida-course/LPs/week-0/)

[Backend Script for Game Indexing](https://ida.interchain.io/ida-course/LPs/week-0/)

[](https://ida.interchain.io/ida-course/LPs/week-0/)

[Week 6 - IBC Deep Dive](https://ida.interchain.io/ida-course/LPs/week-0/)

[IBC Deep Dive](https://ida.interchain.io/ida-course/LPs/week-0/)

[IBC Application Developer Introduction](https://ida.interchain.io/ida-course/LPs/week-0/)

[Make a Module IBC-Enabled](https://ida.interchain.io/ida-course/LPs/week-0/)

[Adding Packet and Acknowledgment Data](https://ida.interchain.io/ida-course/LPs/week-0/)

[Extend the Checkers Game With a Leaderboard](https://ida.interchain.io/ida-course/LPs/week-0/)

[Create a Leaderboard Chain](https://ida.interchain.io/ida-course/LPs/week-0/)

[](https://ida.interchain.io/ida-course/LPs/week-0/)

[Week 7 - From Code to MVP to Production and Migrations](https://ida.interchain.io/ida-course/LPs/week-0/)

[From Code to MVP to Production and Migrations](https://ida.interchain.io/ida-course/LPs/week-0/)

[Run in Production](https://ida.interchain.io/ida-course/LPs/week-0/)

[Prepare the Software to Run](https://ida.interchain.io/ida-course/LPs/week-0/)

[Prepare a Validator and Keys](https://ida.interchain.io/ida-course/LPs/week-0/)

[Prepare Where the Node Starts](https://ida.interchain.io/ida-course/LPs/week-0/)

[Prepare and Connect to Other Nodes](https://ida.interchain.io/ida-course/LPs/week-0/)

[Configure, Run, and Set Up a Service](https://ida.interchain.io/ida-course/LPs/week-0/)

[Prepare and Do Migrations](https://ida.interchain.io/ida-course/LPs/week-0/)

[Simulate Production in Docker](https://ida.interchain.io/ida-course/LPs/week-0/)

[Tally Player Info After Production](https://ida.interchain.io/ida-course/LPs/week-0/)

[Add a Leaderboard as a Module](https://ida.interchain.io/ida-course/LPs/week-0/)

[Migrate the Leaderboard Module After Production](https://ida.interchain.io/ida-course/LPs/week-0/)

[Simulate a Migration in Docker](https://ida.interchain.io/ida-course/LPs/week-0/)

[Final Exam](https://ida.interchain.io/ida-course/LPs/week-0/)

[](https://ida.interchain.io/ida-course/LPs/week-0/)

[What's Next?](https://ida.interchain.io/ida-course/LPs/week-0/)

[Continue Your Interchain Journey](https://ida.interchain.io/ida-course/LPs/week-0/)

Docs Version Switcher

On this page

[In this chapter](https://ida.interchain.io/ida-course/LPs/week-0/#in-this-chapter)

[Next up](https://ida.interchain.io/ida-course/LPs/week-0/#next-up)

[Developer Resources](https://ida.interchain.io/ida-course/LPs/week-0/#developer-resources)

A short introduction to blockchain, Golang, and Docker

**Getting Started**

This chapter provides a general introduction to blockchain technology, Golang, Docker, and some of the technical terms you will encounter throughout the Academy program.



**This chapter is entirely optional and intended as a head start for those who might need it.**   
  
If you do not need a blockchain refresher, feel free to start your journey with the Week 1 content, which will be available by May 18th at 4 pm UTC when the program officially starts.

Working with Cosmos also means working with Golang. If you have not worked much with Go, do not worry. The introduction to Golang is meant as a useful overview of Go, and a starting point for your journey in the Interchain Ecosystem and developing with the Cosmos SDK.

The Docker introduction will help you understand the concepts behind this tool, as you will be using Docker in the upcoming tutorials.

You can also find a short section at the end of the chapter with good-to-know dev terms.



As all blockchain ecosystems keep on growing and maturing, product stacks and terminologies evolve. Thus, please be aware that Cosmos is also known as **the Interchain**. The terms "Cosmos", "Interchain Ecosystem", and "Interchain" are synonymous with each other, and the various tools available to developers ("the stack") can be referred to collectively as the **Interchain Stack**.



[#Copy link](https://ida.interchain.io/ida-course/LPs/week-0/#in-this-chapter) In this chapter



In this chapter, you will:

***Blockchain Basics***

* Understand what a blockchain is.
* Learn how blockchain relates to the double-spending problem.
* Recap the historic development of blockchain technology.
* Dive into the cryptographic fundamentals that make blockchain possible.
* Discover the differentiating characteristics of public and managed chains.
* Revisit how consensus is established in distributed networks.

***Introduction to Go***

* Get a high-level introduction to Golang.
* Discover basic types, string formatting, functions, and methods.
* Begin exploring interfaces in Go.
* Find an introduction to control structures in Go with a closer look at if, switch, and for statements.
* Learn more about arrays and slices, as well as standard packages Go offers.
* Take a look at Go's built-in concurrency by exploring Goroutine and channels.

***Introduction to Docker***

* Get a high-level introduction to Docker.

***Technical terms***

* Review some technical terms essential when developing in Cosmos like LCD, RPC, Protobuf, gRPC, and Amino.

***Docker intro***

* Get an introduction to Docker and explore how to use it. The main tutorials to come will also rely on using Docker.



All other Academy chapters will be displayed on this page starting **May 18th**.

[#Copy link](https://ida.interchain.io/ida-course/LPs/week-0/#next-up) Next up

First, you can take a look at blockchain technology by starting with the section on [Blockchain 101](https://ida.interchain.io/ida-course/0-blockchain-basics/1-blockchain.html).

Then, for a quick overview on Golang, begin with the section [Go Introduction - First Steps](https://ida.interchain.io/tutorials/4-golang-intro/1-install.html).

In case you want to take a look at some technical terms, go ahead and visit the section [Good-To-Know Dev Terms](https://ida.interchain.io/tutorials/1-tech-terms/).

Finally, so you are ready for the hands-on-exercises, consult the [introduction to Docker](https://ida.interchain.io/tutorials/5-docker-intro/).

[#Copy link](https://ida.interchain.io/ida-course/LPs/week-0/#developer-resources) Developer Resources

Cosmos SDK

**Cosmos SDK**

A framework to build application-specific blockchains

[Documentation↗](https://docs.cosmos.network/)

CometBFT

**CometBFT**

Blockchain consensus engine and application interface

[Documentation↗](https://docs.cometbft.com/)

Cosmos Hub

**Cosmos Hub**

First interconnected public blockchain in the Interchain network

[Documentation↗](https://hub.cosmos.network/)

IBC

**IBC**

Industry standard protocol for inter-blockchain communication

[Documentation↗](https://ibc.cosmos.network/)

up next

**[Blockchain 101](https://ida.interchain.io/ida-course/0-blockchain-basics/1-blockchain.html)**

[[](https://ida.interchain.io/ida-course/0-blockchain-basics/1-blockchain.html)](https://ida.interchain.io/ida-course/0-blockchain-basics/1-blockchain.html)

Rate this Page

icon smile

icon meh

icon frown

Would you like to add a message?

Submit

Thank you for your Feedback!

On this page

[In this chapter](https://ida.interchain.io/ida-course/LPs/week-0/#in-this-chapter)

[Next up](https://ida.interchain.io/ida-course/LPs/week-0/#next-up)

[Developer Resources](https://ida.interchain.io/ida-course/LPs/week-0/#developer-resources)

#### **Get Cosmos updates**

Unsubscribe at any time. [Privacy Policy↗](https://v1.cosmos.network/privacy)

     Next

Documentation

[Cosmos SDK](https://docs.cosmos.network/)[Cosmos Hub](https://hub.cosmos.network/)[CometBFT](https://docs.cometbft.com/)[IBC Protocol](https://ibc.cosmos.network/)

Community

[Interchain blog](https://blog.cosmos.network/)[Forum](https://forum.cosmos.network/)[Discord](https://discord.gg/cosmosnetwork)

Contributing

[Source code on GitHub](https://github.com/cosmos/sdk-tutorials)

[](https://ida.interchain.io/)

[Interchain Developer Academy](https://ida.interchain.io/)

**[](https://blog.cosmos.network/)[](https://twitter.com/cosmos)[](https://discord.gg/cosmosnetwork)[](https://www.linkedin.com/company/interchain-foundation/about/)[](https://reddit.com/r/cosmosnetwork)[](https://t.me/cosmosproject)[](https://www.youtube.com/c/CosmosProject)**



Dark mode

† This website is maintained by the Interchain Foundation (ICF). The contents and opinions of this website are those of the ICF. The ICF provides links to cryptocurrency exchanges as a service to the public. The ICF does not warrant that the information provided by these websites is correct, complete, and up-to-date. The ICF is not responsible for their content and expressly rejects any liability for damages of any kind resulting from the use, reference to, or reliance on any information contained within these websites.

Cosmos is a registered trademark of the [Interchain Foundation.](https://interchain.io/)[Privacy](https://v1.cosmos.network/privacy)