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[#Copy link](https://ida.interchain.io/ida-course/final-exam/#final-exam) **Final Exam**

Congratulations on getting this far! You are now ready to take the exam. You can work on your exam until **August 4th** and can submit your exam whenever you feel ready. Importantly, August 4th is a hard cut-off, and we are not granting extensions.

The exam is composed of two parts:

* One **coding project** that involves the Cosmos SDK, Ignite CLI, and CosmJS.
* One **IBC relayer operations** exercise.

[#Copy link](https://ida.interchain.io/ida-course/final-exam/#coding-project) Coding project

An experienced developer can tackle the coding project in 4 hours or less. We have created a repository for you to upload your work on git.academy.b9lab.com. You can find your own repository [here (opens new window)↗](https://git.academy.b9lab.com/ida-p4-final-exam/student-projects). It was forked from [another repository (opens new window)↗](https://git.academy.b9lab.com/ida-p4-final-exam/exam-code) to which you have read-only access.

The detailed steps you need to follow are described in a dedicated readme.md file.

This server runs a Gitlab instance that we manage internally. It runs a CI/CD pipeline that grades your submission as soon as you push it to your repository. You can push as many times as you want and, we hope, see your score increase with every push (more details are in the readme).

Please do not modify the [.gitlab-ci.yml (opens new window)↗](https://git.academy.b9lab.com/ida-p4-final-exam/exam-code/-/blob/main/.gitlab-ci.yml) file, as doing so would invalidate your score.

The coding project counts for 90% of your overall exam score. This means that if the grading pipeline yields the line FS\_SCORE:100%, then congratulations, you already have reached 90% for the overall exam.

Please do not disclose solutions or details of a solution of the exam on public forums so that it can stay relevant as long as possible.

[#Copy link](https://ida.interchain.io/ida-course/final-exam/#ibc-operations) IBC operations

An experienced developer can tackle the IBC operations exercise in 2 hours or less.

This part of the exam counts for 10% of your overall exam score. Unlike the coding project, there are no partial scores. That means you either achieve the goal or you do not. Therefore, in terms of impact on your overall exam score, it either adds 0% or it adds 10%.

You should have received an email that provides two pieces of information that are **unique to you**:

1. The recipient address.
2. The origin denomination.

Head [here (opens new window)↗](https://git.academy.b9lab.com/ida-p4-final-exam/exam-ibc-operation/-/blob/main/exercise-description.md) for the complete exercise description. Take note of the parts where it mentions the identifiers that are unique to you.

We have a service that runs on a schedule and checks if you completed the expected transfer. After you have completed this part, give or take a few hours, you should receive an email confirming that our server successfully detected the transfer you made.



Sometimes, the testnet faucet hits its daily cap. Just to be on the safe side, you can ask for your testnet ATOMs ahead of time. See [here (opens new window)↗](https://git.academy.b9lab.com/ida-p4-final-exam/exam-ibc-operation/-/blob/main/exercise-description.md).

[#Copy link](https://ida.interchain.io/ida-course/final-exam/#overall-exam-score) Overall exam score

To calculate your overall exam score, we combine:

1. Your score from the coding project, with a weight of 0.9.
2. Your score from the IBC operations, with a weight of 0.1.

If your overall score is 80% or higher, then congratulations, you have passed.

[#Copy link](https://ida.interchain.io/ida-course/final-exam/#email-schedule) Email schedule

There are a number of emails that you have received, will receive, or could receive with regards to the exam:

1. The *exam is open* email, which:
   1. Invites you to our Gitlab server.
   2. Mentions the two pieces of information that are unique to you, for the IBC operations part.
2. An email that congratulates you on passing the IBC operations part of the exam, as and when our server detects your correct transfer.
3. A deadline reminder email one week before the deadline.
4. A *pass* or *fail* email, that you will receive after the deadline.

Good luck!

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

Contributing

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