



Cloudwiry Hackathon 2022

Overview

Cloudwiry was founded in 2016 with the intention of doing things the smarter way - to automate the boring and letting innovation be rightfully at the center. We started with cloud cost management and quickly realized that the amount of money to be saved is quite significant and that this is not a one-time problem to be solved, it's an ongoing one.

We understood the immediate need in the industry for automated financial management and quality cost insights.

For our customers, we are a trusted partner that saves them time and money. For our team, we enable entrepreneurship in every individual - whatever they choose to do, wherever they choose to do it from. There is no limit to growth coupled with full flexibility and freedom to work from any place on Earth.

There's a lot that goes into building a culture and we keep it simple - work on what drives you and solve real problems alongside some of the smartest people in the business. It's real every step of the way.

Doing what you love doing, doing it as you want to, in the most time efficient manner is what we enjoy the most and that's the kind of folks Cloudwiry tends to attract. Complete autonomy with rapid growth.

We invite you to participate in our Hackathon themed ***"Storage - An ocean of bits & bytes"***.

This is your chance to ideate, innovate and bring the best solution. The podium is all yours and the winners get an opportunity to win exciting prizes and grab an opportunity to intern with us.

Put on your creative hats and get Hacking!

Problem Statement

We're in a digital economy where data is more valuable than ever. It's the key to the smooth functionality of everything from the government to local companies. Without it, progress would halt. With data becoming enormous so is the requirement for better storage systems.

Therefore building a storage system and understanding the difficulties faced is an important step for research & improvements in the storage technologies.

To trigger curiosity and the critical thinker within you, we at Cloudwiry have decided to formulate this into a hackathon.

The goal is to create a simple blob storage system.

The task is very similar to **Google Drive** or **Amazon S3** features. Ideally the solution should be able to handle file upload, file download, file sharing and file modifications like rename and delete.

The blob storage application should have the following features:

1. **Checkpoint A** - User authentication and session management
2. **Checkpoint B** - Implementation of the blob storage server
3. **Checkpoint C** - Client application (CLI/ web based) for file upload, download, rename and delete
4. **Checkpoint D** - User based access control on who can access the files
5. **Checkpoint E** - Deploy the application
6. **Checkpoint F** (*optional - bonus points*) - File compression

Notes

- The application (CLI/web based) would be judged **only on the functionality** not on the UI or UX.
- Having a high level diagram of the system is appreciated
- Apart from the said features having additional features or making the system more scalable is appreciated and can fetch bonus marks
- In case of a tie between 2 participants, the one with an earlier submission will be considered.
- Qualifying participants will be invited to demo & explain their hack with the judges.



Sample application flow

1. User (John) logs in to the application using username and password (Authentication to happen over HTTP/HTTPS using REST API)
2. John can now view all the files he has access to and has uploaded
3. John decides to upload a new file on to the storage system
4. John later decides to share that file with 2 other users (Alice & Bob)
5. When Alice/Bob login into the system, they should be able to view the file.
6. Alice decides to download the file onto her device.
7. John renames the file and deletes it later on
8. John exits & logout of the application

Rules

1. This is an **individual participation** hackathon
2. It's an **online hackathon**, you can participate from anywhere.
3. The hackathon will start on **25th January 2022 at 6:00 AM UTC** and end on **31st January 2022 at 6:00 PM UTC**, you can work on your hack during the allotted time only.
4. The submissions for the hackathon will start on **27th January 2022 at 6:00 AM UTC**. Details regarding the submission would be shared later as a follow up email.
5. Use **Python** as the programming language for the backend implementation
6. No 3rd party solutions to be used to store the files. I.e The files should be stored on the server you host.
7. Any API written should follow REST Principles.
8. Use **FastAPI** (<https://fastapi.tiangolo.com/>) as the backend framework for the APIs.
9. The hack must be made available on **GitHub as a private repository** giving Cloudwiry access to read. Provide read access to hackathon2022@cloudwiry.com.
10. To be eligible for evaluation you must have completed at least 2 checkpoints.
11. The repository must contain a README.md file explaining the implementation; it could contain diagrams or could have instructions on how to set up and use it.
12. Any plagiarism detected will be disqualified.
13. Your hack must be developed entirely during the Hackathon duration.
14. The intellectual property of your code belongs only to you.

Evaluation Criteria

1. General coding standards & usage of git
2. Blob storage system implementation
3. Database design
4. Originality & creativity
5. Working & Demo of the application

Happy Hacking!

Cheers from Cloudwiry Team

FAQs

1. **Do I need to pay any money to register for the Hackathon?** No. You do not have to pay anything to anyone to register yourself.
2. **Do I need to have any specific qualifications to be a participant for the Hackathon?** If you love to code, you are more than welcome to participate in the Hackathon.
3. **How do I submit what I have made for the Hackathon?** You have to develop the application on your local system and commit the source code to a private GitHub repository giving Cloudwiry access along with instructions to run the application.
4. **How is the environment? Will your environment support any language? Will you provide any IDE and DB for us to work on ideas?** You have to develop the entire software application on your local system.
5. **Does one have to be online and available for the entire duration of the Hackathon?** No, you can develop the application on your local system based on the given problem statement and then submit it.
6. **Do I need to give a demo for the product that I have built?** If you want you can submit a small presentation or video that demo your submission, however it's not mandatory, and only good to have.
7. **Who will own the IP(Intellectual Property) Rights to the product that I have built?** The developer of the application will have all rights and own the IP of the product. However, all code needs to be shared with the judges to be evaluated.
8. **Is there a constraint on the frameworks I can use?** For the frontend you are free to use any framework of your choice but for backend you are expected to use **Python** programming language and **FastAPI** (<https://fastapi.tiangolo.com/>) as the backend framework for the APIs.
9. **What databases can I use?** You are free to choose the database of your choice.
10. **I have a question that is not listed here. Who can I contact?**
You can send an email to ***hackathon2022@cloudwiry.com*** with your queries.