



# EPHYRA

## Preliminary Comments

CertiK Assessed on Sept 22nd, 2025





Certik Assessed on Sept 22nd, 2025

**EPHYRA**

These preliminary comments were prepared by Certik.

**Executive Summary****TYPES**

NFT

**ECOSYSTEM**

EVM Compatible

**METHODS**

Formal Verification, Manual Review, Static Analysis

**LANGUAGE**

Solidity

**TIMELINE**

Preliminary comments published on 09/22/2025

**Vulnerability Summary****2**

Total Findings

**0**

Resolved

**0**

Partially Resolved

**0**

Acknowledged

**0**

Declined

**2**

Pending

**0** Centralization

Centralization findings highlight privileged roles & functions and their capabilities, or instances where the project takes custody of users' assets.

**0** Critical

Critical risks are those that impact the safe functioning of a platform and must be addressed before launch. Users should not invest in any project with outstanding critical risks.

**0** Major

Major risks may include logical errors that, under specific circumstances, could result in fund losses or loss of project control.

**0** Medium

Medium risks may not pose a direct risk to users' funds, but they can affect the overall functioning of a platform.

**1** Minor

1 Pending

Minor risks can be any of the above, but on a smaller scale. They generally do not compromise the overall integrity of the project, but they may be less efficient than other solutions.

**0** Informational

Informational errors are often recommendations to improve the style of the code or certain operations to fall within industry best practices. They usually do not affect the overall functioning of the code.

**1** Discussion

1 Pending

The impact of the issue is yet to be determined, hence requires further clarifications from the project team.

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## **Disclaimer**

# CODEBASE | EPHYRA

## Repository

Privately shared

# AUDIT SCOPE | EPHYRA

CertiKProject/certik-audit-projects

projects/EPHYRA/contracts/answer.sol

## APPROACH & METHODS | EPHYRA

This audit was conducted for EPHYRA to evaluate the security and correctness of the smart contracts associated with the EPHYRA project. The assessment included a comprehensive review of the in-scope smart contracts. The audit was performed using a combination of Formal Verification, Manual Review, and Static Analysis.

The review process emphasized the following areas:

- Architecture review and threat modeling to understand systemic risks and identify design-level flaws.
- Identification of vulnerabilities through both common and edge-case attack vectors.
- Manual verification of contract logic to ensure alignment with intended design and business requirements.
- Dynamic testing to validate runtime behavior and assess execution risks.
- Assessment of code quality and maintainability, including adherence to current best practices and industry standards.

The audit resulted in findings categorized across multiple severity levels, from informational to critical. To enhance the project's security and long-term robustness, we recommend addressing the identified issues and considering the following general improvements:

- Improve code readability and maintainability by adopting a clean architectural pattern and modular design.
- Strengthen testing coverage, including unit and integration tests for key functionalities and edge cases.
- Maintain meaningful inline comments and documentations.
- Implement clear and transparent documentation for privileged roles and sensitive protocol operations.
- Regularly review and simulate contract behavior against newly emerging attack vectors.

## FINDINGS | EPHYRA



2

Total Findings

0

Critical

0

Centralization

0

Major

0

Medium

1

Minor

0

Informational

1

Discussion

This report has been prepared for EPHYRA to identify potential vulnerabilities and security issues within the reviewed codebase. During the course of the audit, a total of 2 issues were identified. Leveraging a combination of Formal Verification, Manual Review & Static Analysis the following findings were uncovered:

ID	Title	Category	Severity	Status
EPH-02	MetadataURI Protocol Not Recommended	Volatile Code	Minor	● Pending
EPH-01	Unrestricted On-Chain Storage Of User Answers	Design Issue	Discussion	● Pending



## EPH-02 | MetadataURI Protocol Not Recommended

Category	Severity	Location	Status
Volatile Code	Minor	answer.sol: 3075	Pending

### Description

HTTP/HTTPS should not be used for token metadata because the server owner can change token metadata at will, which can dramatically affect the token value.

### Recommendation

It is recommended to use IPFS or other decentralized storage solutions for NFT token metadata.



## EPH-01 | Unrestricted On-Chain Storage Of User Answers

Category	Severity	Location	Status
Design Issue	● Discussion	projects/EPHYRA/contracts/answer.sol: 3189	● Pending

### Description

The contract stores user-submitted answers ( `string answer` ) directly in storage ( `answerRecords` ). Because `string` is unbounded, users can submit arbitrarily large payloads, causing unbounded storage growth and higher gas costs. We would like to know if this is the intended design. If not, consider restricting input length by enforcing a maximum size for answers, or storing only hashes of the answers.

# APPENDIX | EPHYRA

## Finding Categories

Categories	Description
Volatile Code	Volatile Code findings refer to segments of code that behave unexpectedly on certain edge cases and may result in vulnerabilities.
Design Issue	Design Issue findings indicate general issues at the design level beyond program logic that are not covered by other finding categories.

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