



Cyberscope

# Audit Report

## **Mr. Beast**

July 2023

Network    ETH

Address    0x11A48F96Ec6977E6DA669141Dd57bddEb80940D5

Audited by    © cyberscope

# Analysis

● Critical ● Medium ● Minor / Informative ● Pass

Severity	Code	Description	Status
●	ST	Stops Transactions	Passed
●	OTUT	Transfers User's Tokens	Passed
●	ELFM	Exceeds Fees Limit	Passed
●	MT	Mints Tokens	Passed
●	BT	Burns Tokens	Passed
●	BC	Blacklists Addresses	Passed

# Diagnostics

● Critical ● Medium ● Minor / Informative

Severity	Code	Description	Status
●	RVD	Redundant Variable Declaration	Unresolved
●	RSW	Redundant Storage Writes	Unresolved
●	L04	Conformance to Solidity Naming Conventions	Unresolved

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## Review

Contract Name	MrBeast
Compiler Version	v0.8.18+commit.87f61d96
Optimization	200 runs
Explorer	<a href="https://etherscan.io/address/0x11a48f96ec6977e6da669141dd57bddeb80940d5">https://etherscan.io/address/0x11a48f96ec6977e6da669141dd57bddeb80940d5</a>
Address	0x11a48f96ec6977e6da669141dd57bddeb80940d5
Network	ETH
Symbol	Mr.beast
Decimals	18
Total Supply	500,000,000,000

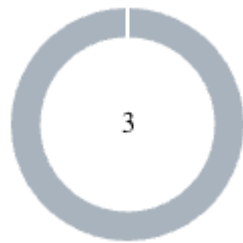
## Audit Updates

Initial Audit	16 Jul 2023
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## Source Files

Filename	SHA256
MrBeast.sol	e40f2948625a8f3ce6a20826b2aeaea09aad2302ce4a6d8a1c69fc966f27a532

## Findings Breakdown



● Critical	0
● Medium	0
● Minor / Informative	3

Severity	Unresolved	Acknowledged	Resolved	Other
● Critical	0	0	0	0
● Medium	0	0	0	0
● Minor / Informative	3	0	0	0

## RVD - Redundant Variable Declaration

<b>Criticality</b>	Minor / Informative
<b>Location</b>	MrBeast.sol#L535
<b>Status</b>	Unresolved

### Description

There are code segments that could be optimized. A segment may be optimized so that it becomes a smaller size, consumes less memory, executes more rapidly, or performs fewer operations.

The contract declares certain variables that are not used in a meaningful way by the contract. As a result, these variables are redundant.

```
mapping(address => bool) public pairAddress;
```

### Recommendation

The team is advised to take these segments into consideration and rewrite them so the runtime will be more performant. That way it will improve the efficiency and performance of the source code and reduce the cost of executing it.

## RSW - Redundant Storage Writes

<b>Criticality</b>	Minor / Informative
<b>Location</b>	MrBeast.sol#L545
<b>Status</b>	Unresolved

### Description

There are code segments that could be optimized. A segment may be optimized so that it becomes a smaller size, consumes less memory, executes more rapidly, or performs fewer operations.

The contract modifies the state of certain variables even when their current state is equal to the provided argument. As a result, the contract performs redundant storage writes.

```
pairAddress[_lpAddress] = _status;
```

### Recommendation

The team is advised to take these segments into consideration and rewrite them so the runtime will be more performant. That way it will improve the efficiency and performance of the source code and reduce the cost of executing it.



## L04 - Conformance to Solidity Naming Conventions

<b>Criticality</b>	Minor / Informative
<b>Location</b>	MrBeast.sol#L544
<b>Status</b>	Unresolved

### Description

The Solidity style guide is a set of guidelines for writing clean and consistent Solidity code. Adhering to a style guide can help improve the readability and maintainability of the Solidity code, making it easier for others to understand and work with.

The followings are a few key points from the Solidity style guide:

1. Use camelCase for function and variable names, with the first letter in lowercase (e.g., myVariable, updateCounter).
2. Use PascalCase for contract, struct, and enum names, with the first letter in uppercase (e.g., MyContract, UserStruct, ErrorEnum).
3. Use uppercase for constant variables and enums (e.g., MAX\_VALUE, ERROR\_CODE).
4. Use indentation to improve readability and structure.
5. Use spaces between operators and after commas.
6. Use comments to explain the purpose and behavior of the code.
7. Keep lines short (around 120 characters) to improve readability.

```
bool _status  
address _lpAddress
```

### Recommendation

By following the Solidity naming convention guidelines, the codebase increased the readability, maintainability, and makes it easier to work with.

Find more information on the Solidity documentation

<https://docs.soliditylang.org/en/v0.8.17/style-guide.html#naming-convention>.

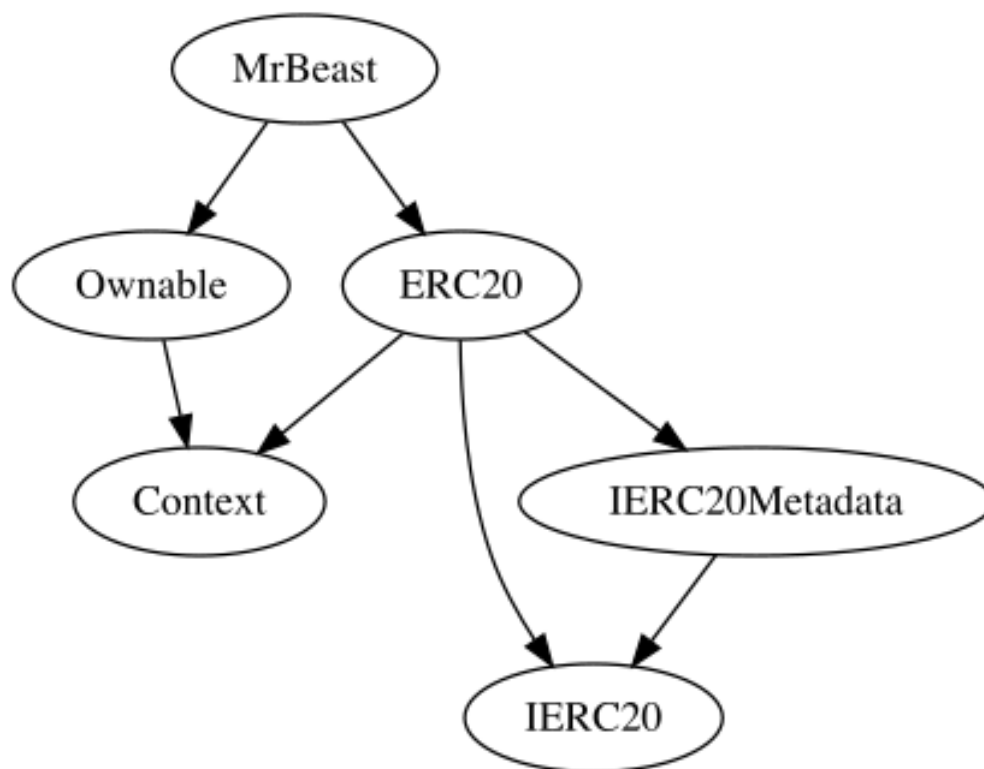
# Functions Analysis

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
<b>Context</b>	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
<b>IERC20</b>	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
<b>Ownable</b>	Implementation	Context		
		Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_transferOwnership	Internal	✓	

<b>IERC20Metadata</b>	Interface	IERC20		
	name	External		-
	symbol	External		-
	decimals	External		-
<b>ERC20</b>	Implementation	Context, IERC20, IERC20Meta data		
		Public	✓	-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	_transfer	Internal	✓	
	_mint	Internal	✓	
	_approve	Internal	✓	

	_beforeTokenTransfer	Internal	✓	
	_afterTokenTransfer	Internal	✓	
<b>MrBeast</b>	Implementation	ERC20, Ownable		
		Public	✓	ERC20
	setPair	External	✓	onlyOwner

## Inheritance Graph



## Flow Graph



## Summary

Mr. Beast contract implements a token mechanism. This audit investigates security issues, business logic concerns and potential improvements. Mr. Beast is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler error or critical issues. The contract Owner can access some admin functions that can not be used in a malicious way to disturb the users' transactions.

## Renounced Ownership

The contract's ownership has been renounced. The information regarding the transaction can be accessed through the following link:

<https://etherscan.io/tx/0x5d1f1c5db6f17261119acdc1c01ac28bf8eeb3c86fc295a96afb267dae8c992a>.

## Disclaimer

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Blockchain technology and cryptographic assets present a high level of ongoing risk. Cyberscope's position is that each company and individual are responsible for their own due diligence and continuous security. Cyberscope's goal is to help reduce the attack vectors and the high level of variance associated with utilizing new and consistently changing technologies and in no way claims any guarantee of security or functionality of the technology we agree to analyze. The assessment services provided by Cyberscope are subject to dependencies and are under continuing development. You agree that your access and/or use including but not limited to any services reports and materials will be at your sole risk on an as-is where-is and as-available basis. Cryptographic tokens are emergent technologies and carry with them high levels of technical risk and uncertainty. The assessment reports could include false positives, false negatives and other unpredictable results. The services may access and depend upon multiple layers of third parties.



## About Cyberscope

Cyberscope is a blockchain cybersecurity company that was founded with the vision to make web3.0 a safer place for investors and developers. Since its launch, it has worked with thousands of projects and is estimated to have secured tens of millions of investors' funds.

Cyberscope is one of the leading smart contract audit firms in the crypto space and has built a high-profile network of clients and partners.



**The Cyberscope team**

<https://www.cyberscope.io>