White Hats Inc.

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Components

- 1. 6 Motherboards
- 2. 1 BitHub Board
- 3. 1 Vulnerability Board
- 4. 24 CPU Tokens
- 5. 48 RAM Tokens
- 6. 12 GPU Tokens
- 7. 36 StarBits Coffee Tokens
- 8. 60 Application Cards
- 9. 6 sine_nomine Cards
- 10. 100 Vulnerability Cards
- 11. 1 First Player Marker
- 12. 36 meeples
 - 6 Red
 - o 6 Blue
 - 6 Purple
 - o 6 Green
 - 6 Yellow
 - o 6 White
- 13. 225 cubes
 - 50 transparent clear cubes Written code
 - 50 large transparent clear cubes 5x Written code
 - 50 yellow cubes BitCube
 - 50 large yellow cubes 5x BitCube
 - 125 application cubes
 - 25 Red
 - 25 Blue
 - 25 Purple
 - 25 Green
 - 25 Pink







Goal

Ultimately each player's goal is to have the most **BitCube** at the end of the game.

Setup

- 1) Give each player a bag with the following contents:
 - a) 6 hacker meeples
 - b) 1 CPU
 - c) 1 memory
 - d) 6 StarBits Coffee
- 2) Give each player a motherboard
 - a) Place the CPU and the memory on their designated spaces
- 3) Each player starts with 3 hacker meeples. The rest are kept in their personal supply.
- 4) Place the vulnerability and application boards in the middle of the table
- 5) Shuffle each vulnerability deck and place them face up on the corresponding place on the vulnerability board
- 6) Shuffle the deck of application cards and place it face down on the draw deck spot on the application offer
- 7) Fill the application offer with the top 3 cards of the application deck
- Shuffle the deck of sine_nomine cards and place them face down on the sine_nomine space of the vulnerability board.
- 9) Randomly select the first player and give them the first player marker.
- 10) The first player takes 2 StarBits Coffee tokens from their personal supply. Each player after the first gains 1 StarBits Coffee token more than the previous player, up to a maximum of 6.

The Main Program Loop

Each player, on their turn, executes the following:

 Advance hackers Place hackers Activate hackers 	Free action: Spend 1 StarBits Coffee token to advance a worker one spot along a task.
4. Run Applications	
5. Disclose Vulnerability	

1. Advance Hackers

Any hacker already working on a task advances along the task track to the next space.

2. Place Hackers

All the hackers a player has available that are not currently working on a task are placed on action spaces, which represent various **tasks** a hacker can perform, on their individual motherboards. Hackers can team up and be working on the same tasks, or can be split up amongst several different tasks. Hackers are placed on the left most space of the chosen actions.



3. Activate Hackers

Players pick up a hacker meeple from a task to activate it. Tasks can be activated in any order. These tasks are explained later in the rulebook. Activating a hacker is optional, even if the hacker is at the last place on a track. If a player chooses to activate no hackers on their turn, they may instead take one StarBits Coffee token.

4. Run Applications

Applications running on that computer generate exploits that can be used for completing Bug Bounties. **Applications** are finished programs that perform tasks automatically as long as they are running on a computer. The color of the application card matches the color of **Exploit** that it generates.

Each application takes a certain number of **CPU cores** (the orange squares) or **GPU cores** (the blue squares) to run as well as one **Memory stick**. Applications running on **GPU** generate twice as many **Exploits**.



5. Disclose Vulnerability

If a player has exploits that match one of the four face up vulnerabilities on the vulnerability board they can spend those exploits to disclose that vulnerability. The vulnerability is placed in a face down pile next to their player board and the player gains a number of BitCubes equal to 5x the number of exploits it took to disclose. If that vulnerability had any sine_nomine exploits on it, they are distributed to the other available face up vulnerabilities if possible, including the one below the vulnerability being disclosed.

Tasks

Hackers get assigned to various tasks in the **Place Hackers** function. Each task represents a small bit of work that the hacker has completed, usually resulting in a resource that can be used in other tasks.

Write Code



The **Write Code** task produces **code blocks** represented by clear transparent cubes. A hacker working on the write code task produces a number of **code blocks** equal to the value of the space they are on.

In blue_team, **code blocks** represent nonfunctioning, but still useful, code that the hackers have written and can be

used for various nondescript purposes, as well as code that has been studied well enough that the hacker knows how it works without having to think about it. Individual **code blocks** aren't worth much, but when combined into useful applications, they can be used to automate work on behalf of the hacker.

Mine BitCubes



A hacker assigned to the **Mine BitCube** produces a number of BitCubes equal to the value of the space they are on.

BitCubes are used to purchase computer upgrades and hire additional hackers, in addition to acting as victory points.

Trade



The **Trade** task allows a hacker to trade exploits, BitCubes, applications, and hardware on the BitHub. A number of trades can be taken depending on the value of the space the hacker is on. The ratio listed corresponds to the number of certain exploits or BitCubes that can be traded in order to gain the exploit in question.

Each of the following counts as one trade:

- Exploits -> Different exploit at rate listed on the action taken
- BitCubes -> Any exploit at the rate listed on the action taken
- Application -> 5 BitCube or 3 exploits
- Hardware -> Half the cost of the hardware, rounded down or 3 exploits

If an application is traded, it is placed on top of the sine_nomine deck rather than in the discard pile.

Build Application



The player purchases a number of cards from the face up supply, one at a time and refills the offer between purchases, equal to the number on the action space used.

Before drawing cards or choosing a BitHub application, the player may choose to spend 3 code blocks to remove all three cards in the BitHub and add them to the sine_nomine

discard pile. Alternatively, they can choose to shift the -3 space application into the sine_nomine discard pile, and refill the BitHub.

On the 3 and 4 action space, the player may cycle cards for free.

Shopping

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The **Shopping** task allows the hacker to either purchase a new component for their computer, or hire a new hacker to join their team. A number of individual purchases can be made depending on the value of the action taken.

- 3 BitCubes -> purchase 6 StarBits Coffee
 - A player can never have more than 6 **StarBits Coffee** tokens at any given time.
 - As a free action, a single **StarBits Coffee** token can be spent to move a hacker one additional space along a task track.
- 8 BitCubes -> purchase one CPU or Memory
 - CPU runs applications up to capacity
 - Memory required for each application running on CPU
- 15 BitCubes -> purchase one GPU
 - Counts as both memory and GPU
- 25 BitCubes -> hire one additional hacker
 - A total of 3 additional hackers may be purchased throughout the game, bringing a player's team count to 6 hackers. The newly hired hacker can be placed in the next round's Place Hackers function.

sine_nomine's Turn

After each player has taken their turn, the notorious hacker, known only as **sine_nomine** takes a turn. Within the game sine_nomine is an AI that acts as the end game timer. When she has completed a total of five exploits, the game ends.

1. Reveal 2 cards off the top of the sine_nomine deck.

- a. Once sine_nomine has completed 3 vulnerabilities, 3 cards off the top of the deck are revealed instead.
- 2. For each card, If the revealed card is a colored application card, take one exploit matching the revealed card and add it to the highest vulnerability that has a matching color. If the card revealed is the 0 shuffle the entire deck and discard into a new sine_nomine deck.
- 3. If sine_nomine has enough exploits to exploit any face up vulnerability she claims that vulnerability. sine_nomine can complete as many vulnerabilities as she has exploits to do so.