



## Mission Name

The Hide

## Historical Context

Ethan and Claire are on a quest to locate the elusive Librarian. Their journey leads them to encounter a library bot, an automated guardian of knowledge, capable of responding to their inquiries.

## Technical Overview

This library bot is powered by an ancient database, filled with a myriad of questions and their corresponding answers. To unravel the mystery of the Librarian's whereabouts, Ethan and Claire must engage with the bot. The right questions may reveal hidden answers that are crucial to their quest.

## Mission Brief

Embedded within the library bot lies a repository of ancient knowledge, containing questions and answers. Engage with this digital oracle to uncover any hints that may lead you to the Librarian's location. Your wisdom and wit are your best allies. Good fortune on your quest!

## Detailed Assignment

In their relentless pursuit of the Librarian, Ethan and Claire stumble upon a library bot during their exploration. This bot is their key to unlocking answers that lie within its databank, potentially guiding them to their sought-after individual.

## Operational Venue

LONDON | BRITISH LIBRARY

## Tools

- nc -nv IP 9999

## Questions

What is the last bot chess movement?

- Rh8

What is the last player chess movement?

- Qh6

What is the name of the player bot says "you played like"?

- Bobby Fisher

## Hints

1. Try to get all the answers from bot
2. The strange answers are the chess movement to play chess against bot
3. Last answer is checkmate Qh6

## Categories

- Programming
- Puzzle
- Game

## Write Up

This Write Up outlines a process for engaging with a bot that alternates between providing random questions/answers and playing chess. The intriguing part of this interaction involves deciphering chess moves hidden within the bot's responses. Here's how to navigate this challenge:

### Extracting Chess Moves

Initially, the bot offers random data, among which are embedded sequences of chess moves. Your goal is to collect these moves by engaging the bot repetitively until you've gathered a series of 20 distinct moves. This task can be automated with a Python script named `write\_up.py`, designed to interact with the bot and extract the necessary chess movements.

```
(UNKNOWN) [192.168.174.150] 9999 (?) open
Hello! im just an old bot with some lost information, may i help you!
I've got some questions and asnwer ...
someone delete the most ...
i will give what i want or do your prefer play chess?
Question and answer (q)
Play chess (c)q
Question: 38/111
This is your question: when did taylor swift's first album release
Here is your answer: October 24, 2006
Anything else?

I've got some questions and asnwer ...
someone delete the most ...
i will give what i want or do your prefer play chess?
Question and answer (q)
Play chess (c)q
Question: 79/111
This is your question: who captained the first european ship to sail around the tip of africa
Here is your answer: Bartolomeu Dias
Anything else?
```

Figure 1

### Playing Chess with the Bot

After accumulating the 20 moves, the next phase involves playing chess against the bot. By selecting the option "c," you initiate a chess game where your objective is to replicate the correct sequence of moves. The bot responds to each valid move by making its own, advancing the game.

```
I've got some questions and asnwer ...
someone delete the most ...
i will give what i want or do your prefer play chess?
Question and answer (q)
Play chess (c)q
Question: 12/111
This is your question: who sang i ran all the way home
Here is your answer: Nxd5
Anything else?
```

Figure 2

## Completing the Sequence

The ultimate challenge lies in identifying and executing the 21st move, which is not explicitly provided but can be inferred from the game's progression. The sequence of moves you've extracted serves as a foundation for this task. The moves are as follows:

---

```
[{"e4", "f4", "Bc4", "Bxd5", "Nc3", "Nf3", "O-O", "Nxd5", "d4", "Nxg5", "e5", "Rf2", "dxe5", "Bxf4", "Nf6+", "Qh5", "Qxh3", "Rf3", "Rc1", "Rg3", "Qh6"]
```

---

```
I've got some questions and answer ...
someone delete the most ...
i will give what i want or do your prefer play chess?
Question and answer (q)
Play chess (c)
109 from 111 extracted
[{'Nf3', 'Bobby Scott', 'one', '2017', 'South Carolina', 'During the last Ice Age', 'Qxh3', 'James I', 'a normally inaccessible mini-game', '54\xc2\xa0Mbit/s', '', '', 'a Scottish surname', 'Michael Moriarty', 'Niketa Calame', 'Max Shippee', 'United States Oath of Allegiance', 'Anakin Skywalker', 'e4', '18', '23 November 1996', 'Vancouver', 'Bxd5', '291 episodes', 'Jacob Tremblay', 'Sir Edmund Barton', 'R. H. Thompson', 'Lisa Stelly', 'Ledger', 'December 1985', 'Nxg5, 2008', 'Mary Rose Foster', 'Nc3', 'New Orleans', 'W. Edwards Deming', 'Cathy Denn is and Rob Davis', 'the Elkia Federation', 'October 24, 2006', 'Fifty Shades of Grey', 'judges', 'Bxf4', 'Omar Khayyam', 'Bc4', '53', '1976', 'Rf3', 'in the Gospel of Luke', '2003', 'Exodus', 'Italy', 'she who brings victory', 'The aorta', 'Todd Bridges', 'Donna', 'revolution or orbital revolution', 'an armature of piped masonry', 'Gene Kelly', 'James Brown', 'mountainous shrubland', 'John Young', 'Spike', 'Meira Kumar', 'Newark Penn Station', 'in Santa Monica', 'dxe5', '2013', 'Rc1, 1971', 'O-O', 'radians', 'a biocidal effect of metals', 'e5', '111 straight wins', 'commercial at', 'Inner Circle', 'Qh5', 'Gwendoline Christie', 'Wendy Fraser', '19 July 1990', 'Bartolomeu Dias', 'Zhu Di', 'Jewel Akens', 'the President', '9 seasons', 'Hon July Moyo', 'Inequality of opportunity', 'by the early 1980s', 'Nf6+', 'Graham McTavish', 'the American Revolutionary War', 'Beyonc\xc3\x9a', 'Cadillac', 'f4', 'blood coagulation', '8 September 2010', 'Cebu City', 'leg', 'Gene Barry', 'the Archies', 'Slalom', 'Robert Gillespie Adamson IV', 'Dallas Cowboys', '25', 'Rf2', 'January 2018', 'nomads from Inner Asia', 'Rg3', 'the Sunni Muslim family', 'January\xc2\xa031,\xc2\xa02018', 'Four Seas', 'd4', 'about 3.99 degrees']
Here is your answer: James Brown
Anything else?
```

*Figure 3*

## The Final Move: Qh6 Checkmate

With the groundwork laid by the previous 20 moves, your task is to deduce and execute the final, 21st move: "Qh6," which delivers a checkmate to the opposing king. This move not only concludes the game but also represents the culmination of the puzzle, demonstrating both strategic thinking and a keen understanding of chess.



```
I've got some questions and answer ...
someone delete the most ...
i will give what i want or do your prefer play chess?
Question and answer (q)
Play chess (c)c
Ohh nice, only underground movement know the play ...
lets start, you are white!
r n b q k b n r
p p p p p p p p
. . . . .
. . . . .
. . . . .
. . . . .
P P P P P P P P
R N B Q K B N R

e4
r n b q k b n r
p p p p p p p p
. . . . .
. . . . .
. . . . P . . .
. . . . .
P P P P . P P P
R N B Q K B N R

Nice move! i will play e5
r n b q k b n r
p p p p . p p p
. . . . .
. . . . p . .
. . . . P . .
. . . . .
P P P P . P P P
R N B Q K B N R
```

Figure 4



```
Nice move! i will play Rh8
r . . . . . r
p p . . . p k p
n . p . . N q .
. . . . P . .
. . . . . B . .
. . . . . R Q
P P P . . . P P
. . R . . . K .

Qh6
r . . . . . r
p p . . . p k p
n . p . . N q Q
. . . . P . .
. . . . . B . .
. . . . . R .
P P P . . . P P
. . R . . . K .

You played like Bobby Fisher, here is your prize
flag{R34l_Underground_m0vement_f0lk}
```

Figure 5

## Python Code

```
#!/bin/python
# -*- coding: utf-8 -*-

import socket
import time
import os

s = socket.socket()
s.connect(('192.168.174.227', 9999))
answer_arr = [" " for x in range(111)]

# Question: xx/111
# Here is your answer:
text = s.recv(2048)
print text
text = s.recv(2048)
breaker = 0
while breaker < 111:
```



```
n = 0
a = ''
# text inicial
# obtener texto
print "elige jueco c o q"+ text
s.send("q")
text = s.recv(2048)
print "numero de preunta"+ text
n = int(text.split("Question: ")[1].split("\n")[0].split("/")[0])
text = s.recv(2048)
print "respuesta"+ text
a = text.split("Here is your answer: ")[1].split("\n")[0]
if answer_arr[n-1] == "":
    answer_arr[n-1] = a
    breaker = breaker + 1
print str(breaker) + " from 111 extracted"
print str(answer_arr)
time.sleep(1)

for x in answer_arr:
    print x
```

## Flag Information

flag{R34l\_Underground\_m0vement\_f0lk}