



HOLLOW DEV
CHALLENGES

HOLLOW DEV



01 - FALSE KNIGHT

EASY



02 - HORNET

EASY



03 - MANTIS LORDS

MEDIUM



04 - WATCHER KNIGHT

MEDIUM



05 - FALSE KNIGHT

MEDIUM



06 - TRAITOR LORD

MEDIUM



07 - NIGHTMARE
KING GRIMM

HARD



08 - HOLLOW KNIGHT

HARD



09 - THE RADIANCE

HARD



I- FALSE KNIGHT

DESCRIPTION

OBJECTIVE :

CREATE A CRUD API FOR MANAGING GAME CHARACTERS THAT ALLOWS ADDING, UPDATING, DELETING, AND RETRIEVING GAME CHARACTERS.

REQUIREMENTS :

- IMPLEMENT A CRUD API FOLLOWING RESTFUL STANDARDS.
- IMPLEMENT A SIMPLE PAGINATION FOR RETRIEVING LISTS OF GAME CHARACTERS
- IMPLEMENT MIDDLEWARE TO HANDLE NOT FOUND AND INTERNAL SERVER ERRORS.

BONUS:

- IMPLEMENT VALIDATION MIDDLEWARE TO VALIDATE THE REQUEST BODY FOR POST AND PUT REQUESTS. +30

LEVEL

THIS CHALLENGE IS EASY

POINTS

COMPLETING THIS CHALLENGE GRANTS YOU 60 POINTS



2- HORNET

DESCRIPTION

OBJECTIVE :

IN THIS CHALLENGE YOU NEED TO CREATE A FILE UPLOADING SYSTEM THAT ALLOWS USERS TO UPLOAD FILES TO THE SERVER AND RETRIEVE THEM.

REQUIREMENTS :

- THE FILES SHOULD BE STORED IN A FOLDER ON THE SERVER.
- THE FILES INFORMATIONS (NAME,SIZE,DESCRIPTION,MIME_TYPE,...) SHOULD BE STORED IN A DATABASE WHERE EACH FILE HAS A UNIQUE ID.
- THE API SHOULD HAVE AN ENDPOINT TO UPLOAD FILES.
- THE API SHOULD HAVE AN ENDPOINT TO RETRIEVE FILE INFORMATION BY ID.
- THE API SHOULD HAVE AN ENDPOINT TO UPDATE FILE INFORMATION
- THE API SHOULD HAVE AN ENDPOINT TO RETRIEVE FILE BY ID.
- THE API SHOULD HAVE AND ENDPOINT TO DELETE FILE BY ID.

BONUS:

- ADD UPLOAD A COPY OF THE FILE TO A CLOUD STORAGE SERVICE. +30

LEVEL

THIS CHALLENGE IS **EASY**

POINTS



COMPLETING THIS CHALLENGE
GRANTS YOU **80** POINTS



3- MANTIS LORDS

DESCRIPTION

OBJECTIVE :

IN THIS CHALLENGE YOU NEED TO CREATE A TIC TAC TOE GAME THAT ALLOWS TWO PLAYERS TO PLAY AGAINST EACH OTHER FROM DIFFERENT DEVICES USING REAL TIME COMMUNICATION (WEBSOCKETS).

REQUIREMENTS :

- IMPLEMENT A CRUD API FOLLOWING RESTFUL STANDARDS.
- IMPLEMENT A SIMPLE PAGINATION FOR RETRIEVING LISTS OF GAME CHARACTERS
- IMPLEMENT MIDDLEWARE TO HANDLE NOT FOUND AND INTERNAL SERVER ERRORS.

BONUS:

- IMPLEMENT VALIDATION MIDDLEWARE TO VALIDATE THE REQUEST BODY FOR POST AND PUT REQUESTS. **+35**

LEVEL

THIS CHALLENGE IS **MEDIUM**

POINTS

COMPLETING THIS CHALLENGE GRANTS YOU **150** POINTS



4- WATCHER KNIGHT

DESCRIPTION

OBJECTIVE :

CREATE A VOTING SYSTEM WHERE REGISTERED USERS CAN VOTE FOR THEIR PREFERRED CANDIDATE.

REQUIREMENTS :

- THERE ARE TWO TYPES OF USERS: ADMIN AND NORMAL USER.
- ONLY THE ADMIN CAN ADD CANDIDATES FOR THE ELECTION.
- CANDIDATES MUST BE REGISTERED AS NORMAL USERS.
- IMPLEMENT MEASURES TO PREVENT DUPLICATE VOTING.
- ADD LOGGING FUNCTIONALITY TO LOG EVENTS ON THE SERVER.
- ENSURE SECURE AND UNIQUE USER AUTHENTICATION.

BONUS:

- UTILIZE WEB3 TECHNOLOGY FOR ENHANCED SECURITY AND TRANSPARENCY. +120

LEVEL

THIS CHALLENGE IS MEDIUM

POINTS

COMPLETING THIS CHALLENGE
GRANTS YOU 120 POINTS



5- BROKEN VESSEL

DESCRIPTION

OBJECTIVE :

CREATE A SERVER MONITORING WEB APPLICATION THAT ALLOWS PARTICIPANTS TO EXECUTE LINUX COMMANDS, DISPLAY DIRECTORIES, MANAGE FILES, LIST RUNNING SERVICES, AND MONITOR CPU AND RAM USAGE. THE APP SHOULD FUNCTION SIMILARLY TO TOOLS LIKE PLESK OR WEBMIN.

REQUIREMENTS :

- IMPLEMENT A DASHBOARD TO DISPLAY SYSTEM METRICS (E.G., CPU AND RAM USAGE).
- DEVELOP A DIRECTORY EXPLORER FOR NAVIGATING AND MANAGING DIRECTORIES.
- ENSURE ROBUST SECURITY MEASURES ARE IN PLACE.
- PROVIDE A BASIC HTML FRONTEND.
- ENABLE INTERACTION WITH THE SERVER TO CREATE SERVICES, CONFIGURE FILES, AND EXECUTE BASH SCRIPTS.

LEVEL

THIS CHALLENGE IS MEDIUM

POINTS

COMPLETING THIS CHALLENGE
GRANTS YOU 150 POINTS



6- TRAITOR LORD

DESCRIPTION

OBJECTIVE :

IN THIS CHALLENGE, YOU NEED TO DEVELOP A WEB APPLICATION SIMILAR TO GOOGLE FORMS, ENABLING USERS TO CREATE AND MANAGE CUSTOM FORMS.

REQUIREMENTS :

- IMPLEMENT AN ACCOUNT SYSTEM FOR USER AUTHENTICATION.
- ALLOW USERS TO CREATE AN UNLIMITED NUMBER OF FORMS.
- PROVIDE A BASIC HTML FRONTEND FOR FORM CREATION.
- ENSURE THAT FORM RESPONSES ARE SECURELY STORED AND CAN BE RETRIEVED.
- ADD LOGGER TO LOG THE GAME EVENTS IN THE SERVER.

BONUS:

- IMPLEMENT REAL-TIME FORM EDITING CAPABILITIES USING WEBSOCKET TECHNOLOGY. +50

LEVEL

THIS CHALLENGE IS MEDIUM

POINTS

 COMPLETING THIS CHALLENGE GRANTS YOU 150 POINTS



7- NIGHTMARE KING GRIMM

DESCRIPTION

OBJECTIVE :

DEVELOP A MEETING APPLICATION THAT ALLOWS USERS TO CREATE AND JOIN MEETINGS WITH REAL-TIME COMMUNICATION FEATURES.

REQUIREMENTS :

- IMPLEMENT AN ACCOUNT SYSTEM FOR USER REGISTRATION AND AUTHENTICATION.
- ENABLE REAL-TIME CHAT FUNCTIONALITY IN THE MEETING.
- ADD A CODE SYSTEM THAT ALLOWS USERS TO CREATE MEETINGS IDENTIFIED BY A UNIQUE CODE, AND JOIN THEM. ALLOW MULTIPLE MEETINGS TO BE CREATED AT THE SAME TIME ON THE SAME SERVER.
- PROVIDE A FRONTEND INTERFACE.
- USE WEBRTC TECHNOLOGY FOR REAL-TIME COMMUNICATION.
- ALLOW USERS TO OPEN THEIR CAMERA DURING THE MEETING.

BONUS:

- ADD A FEATURE THAT ALLOWS USERS TO SHARE THEIR SCREEN DURING THE MEETING. +100

LEVEL

THIS CHALLENGE IS **HARD**

POINTS

COMPLETING THIS CHALLENGE
GRANTS YOU **250** POINTS



8- HOLLOW KNIGHT

DESCRIPTION

OBJECTIVE :

IN THIS CHALLENGE YOU NEED TO DEVELOP A COMPREHENSIVE LEARNING PLATFORM WITH FEATURES FOR USER INTERACTION, COURSE MANAGEMENT, AND SECURE TRANSACTIONS.

REQUIREMENTS :

- IMPLEMENT GRAPHQL FOR API QUERIES AND MUTATIONS.
- IMPLEMENT AN ACCOUNT SYSTEM FOR USER REGISTRATION AND AUTHENTICATION.
- ALLOW ADMINS TO ADD SUB-ADMINS.
- ONLY ADMINS AND SUB-ADMINS CAN ADD COURSES.
- ADD A DASHBOARD FOR ADMINS.
- INTEGRATE A PAYMENT SYSTEM FOR COURSE ENROLLMENT.
- ENSURE THE PLATFORM IS SECURE.
- PROVIDE A FRONTEND INTERFACE (BASIC HTML/CSS).
- ADD FEATURES SUCH AS COURSE PROGRESS TRACKING AND EMAIL CERTIFICATES.

BONUS:

- ADD FEATURES LIKE INTERACTIVE QUIZZES AND FORUMS FOR DISCUSSION. +70

LEVEL



POINTS

COMPLETING THIS CHALLENGE
GRANTS YOU **250** POINTS



9- THE RADIANCE

DESCRIPTION

OBJECTIVE :

IN THIS CHALLENGE YOU NEED TO DEVELOP A REAL-TIME CHAT APPLICATION WITH MULTIPLE FEATURES FOR USER INTERACTION AND MANAGEMENT.

REQUIREMENTS :

- IMPLEMENT AN ACCOUNT SYSTEM FOR USER REGISTRATION AND AUTHENTICATION.
- ENABLE REAL-TIME CHAT FUNCTIONALITY.
- USE A CDN (CONTENT DELIVERY NETWORK) FOR EFFICIENT CONTENT DELIVERY.
- DEVELOP A ROOM SYSTEM WHERE USERS CAN CREATE AND JOIN CHAT ROOMS.
- PROVIDE A FRONTEND INTERFACE.
- IMPLEMENT GRAPHQL FOR API QUERIES AND MUTATIONS.

BONUS:

- ADD A STATUS FEATURE TO SHOW IF USERS ARE ONLINE OR OFFLINE.

+80

LEVEL

THIS CHALLENGE IS **HARD**

POINTS

COMPLETING THIS CHALLENGE
GRANTS YOU **250** POINTS





HOLLOW DEV ENJOY THE HACK

