

The image shows a simulated escape room environment. The walls are constructed from rough-hewn stone blocks. In the center, a large, dark metal door is set into the wall. The door features a complex puzzle grid with various symbols, including a compass rose in the top left, a keyhole in the bottom left, and several circular icons with different symbols inside. The floor is made of large, dark stone tiles. On the left wall, a single candle is mounted on a sconce. On the floor, near the bottom corners, there are small groups of lit candles providing ambient light. A semi-transparent white banner with a black border is overlaid across the middle of the image, containing the title text.

AN ESCAPE ROOM GAME SIMULATION

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"Do or Die" is a survival game where the player navigates through a series of rooms, each filled with unique challenges. Using logical commands, players must perform specific actions to overcome the obstacles in each room. Success allows progression to the next room, while failure results in the player's demise, ending the game.

USAGE of LEX and YACC in this project

This escape room game is made using LEX and YACC. The game processes player inputs, validates actions, and determines outcomes dynamically by leveraging Lex for lexical analysis and Yacc for parsing and executing game logic.

Lex identifies and returns tokens based on player input. Yacc processes these tokens. Matches the tokens to grammar rules. Decides if the player progresses to the next room or ends the game.



GRAMMAR defined

```
%%  
  
Game : CH1 { checkGameStatus(); } ;  
CH1  : a { challengeTwo(); } CH2 | b { failC1(); } ;  
CH2  : c { challengeThree(); } CH3 | d { failC2(); } ;  
CH3  : e { challengeFour(); } CH4 | f { failC3(); } | g { failC3(); } | h { failC3(); } ;  
CH4  : i { bonusChallenge(); } BONUS | j { failC4(); } ;  
BONUS : k | j { failBonus(); } ;  
  
%%
```

TOKENS for the GRAMMAR

%%

```
"flare"      { return a; }
"climb"      { return b; }
"23"         { return c; }
"option1"    { return e; }
"option2"    { return f; }
"option3"    { return g; }
"option4"    { return h; }
"fire"       { return i; }
"CLR"        { return k; }
[0-9]+       { yylval.string = strdup(yytext); return d; }
[0-9a-zA-Z_]+ { yylval.string = strdup(yytext); return j; }
[ \t\n]+     { /* Ignore whitespace */ }
```

%%

THANK YOU!

We hope you enjoyed our game!