trie +cur_char: char +next_char: trie[] +max_length: int +find_prefix(index, char[]): int +insert_word(index, char[]): void

clue +x position: int +y position: int +number: int +direction: char +clue: String +answer: char[] +index: int + init (x position, y position, number, direction, length) +str(): String +get position(): x,y +get_x_position(): int +get_y_position(): int +get_number(): int +get direction(): int +get_clue(): String +get answer(): String +set_clue(String): void +append_answer(char): int

crossword generator

- +crossword: crossword +clue_repo: pd.dataframe
- +answers: trie
- +size
- + init (size, filepath)
- +generate_trie(): trie
- +generate(): crossword
- +generate structure(crossword)
- +generate clue set(crossword)

crossword

- +board: board
- +clue_set: clue[]
- +__init__(size)
- +get_word(row, col): String
- +get_word(index, down): String
- +set char(row, col, char): void
- +to txt(): String
- +get clue set(): Clue[]
- +get_board(): Board
- +set number(rol, col, number, len):void
- +get number(row,col): int
- +validate structure(): boolean
- +mark_tile(): void

board

- +letter_board: ndarray
- +start_board: ndarray
- + init (size)
- +get word(row, col): String
- +get word(index, down): String
- +get char(row, col): char
- +set char(row, col): void
- +set number(row, col, number,len):void
- +validate structure(): boolean
- +mark tile(row, col):void