

## Operations of Main Class

My Main class obtains initial gameGrid, initial leaderboard and commands that performs operations as inputs from gameGrid.txt by using Scanner, leaderboard.txt and command.txt files and outputs corresponding outputs to monitoring.txt and leaderboard.txt files by using FileWriter. After these operations,

- If upcoming command from command.txt is a coordinate and content of this coordinate is not equal to string “ ”,
  - If the content of the index that is given by user equals to one of these strings: “D”, “S”, “T”, “W”, Main class calls dstwPart class.
  - If the content of the index that is given by user equals to one of these strings: “/”, “-”, “+”, “\”, “|”, Main class calls mathSymbolsPart class.
- If upcoming command from command.txt is a coordinate and content of this coordinate equals to string “ ”, Main class warns user with output message “Please enter a valid coordinate”
- If upcoming command from command.txt equals to string “E”, Main class prints the total score and asks user to give a person’s name to prints rank of this user and difference of the score of this person and the person whose ranking is 1 step lower than input

## Operations of dstwPart Class

dstwClass performs operations if content of the index of gameGrid equals to one of these strings: “D”, “S”, “T”, “W” by using its subclasses and calculate totalScore value. Its subclasses: horizontalDstw, verticalDstw, horizontalThenVerticalDstw, leftDiagonalDstw, rightDiagonalDstw, leftThenRightDiagonalDstw, verticalThenHorizontalThenLeftThenRightDiagonalDstw are checks possible jewels for different conditions and calculate score value.

## Operations of mathSymbolsPart Class

mathSymbolsPart performs operations if content of the index of gameGrid equals to one of these strings: “/”, “-”, “+”, “\”, “|” by using its subclasses and calculate totalScore value. Its subclasses: horizontalMath, verticalMath horizontalThenVerticalMath, leftDiagonalMath, rightDiagonalMath, leftThenRightDiagonalMath, verticalThenHorizontalThenLeftThenRightDiagonalMath are checks possible jewels for different conditions and calculate score value.

