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/**      Variable Descriptions for Calculator and its libraries.      */
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```
/*
 * src/Calculator.java
 *      < Calculator >
 *
 * -----
 * Serial no. | Variable name | Data type | Purpose
 * -----
 * 1 | commandRegex | String | Regular expression
 *   |             |       | matching a command
 * -----
 * 2 | previousAns | String | Stores the previously
 *   |          |       | evaluated answer
 * -----
 * 3 | expParser | ExpressionParser | Object with methods
 *   |        |       | for evaluating math
 *   |        |       | expressions
 * -----
 *
 *      < Calculator.main(String[]) >
 *
 * -----
 * Serial no. | Variable name | Data type | Purpose
 * -----
 * 1 | expression | String | Store the expression
 *   |          |       | entered
 * -----
 * 2 | command | String | Store the command
 *   |       |       | entered
 * -----
 * 3 | inp | Scanner | Object with methods
 *   |   |       | for input
 * -----
 * 4 | i | int | Counter variable
 * -----
 *
 *      < Calculator.evaluate(String) >
 *      < Calculator.parseCommand(String) >
 */
```

```
/*
 * src/CommandNotFoundException.java
 *      < CommandNotFoundException >
 *
 * -----
 * Serial no. | Variable name | Data type | Purpose
 * -----
 * 1 | command | String | Store the invalid
 *   |       |       | entered
 * -----
 *
 *      < CommandNotFoundException
 *          .CommandNotFoundException(String) >
 *      < CommandNotFoundException.getCommand() >
 */
```

```
/*
 * src/com/github/sahasatvik/math/ExpressionParser.java
 *      < ExpressionParser >
 *
 * -----
 * Serial no. | Variable name | Data type | Purpose
 * -----
 * 1 | numberRegex | String | Regular expression
 *   |          |       | matching a number
 * -----
 * 2 | signedNumberRegex | String | Regular expression
 *   |                |       | matching a signed
 *   |                |       | number
 * -----
 * 3 | assignmentRegex | String | Regular expression
 *   |              |       | matching an
 *   |              |       | assignment statement
 * -----
 */
```

4	operators	String[]	Array of arithmetic operators (BODMAS)
5	variables	String[][]	Array of variable names and values
6	numberOfVars	int	Number of variables currently defined
< ExpressionParser.ExpressionParser(int) >			
< ExpressionParser.addVariable(String, String) >			
Serial no.	Variable name	Data type	Purpose
1	i	int	Counter variable
< ExpressionParser.evaluate(String) >			
Serial no.	Variable name	Data type	Purpose
1	result	String	Store the result after evaluating expressions
< ExpressionParser.parseVariables(String) >			
Serial no.	Variable name	Data type	Purpose
1	i	int	Counter variable
2	start	int	Store index of opening angled brackets ('<')
3	end	int	Store index of closing angled brackets ('>')
< ExpressionParser.parseParenthesis(String) >			
Serial no.	Variable name	Data type	Purpose
1	result	String	Store the result after evaluating the part in parenthesis
2	start	int	Store index of opening parenthesis ('(')
3	end	int	Store index of closing parenthesis (')')
< ExpressionParser.parseFunctions(String) >			
Serial no.	Variable name	Data type	Purpose
1	result	String	Store the result after evaluating the part in parenthesis
2	func	String	Store the function name
3	x	double	Store the value of the function argument
4	start	int	Store index of opening square brackets ('[')
5	end	int	Store index of closing square brackets (']')

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*                                     < ExpressionParser.parseOperators(String) >
*
* -----
* Serial no. | Variable name | Data type | Purpose
* -----
* 1 | leftIndex | int | Store index of left operand
* -----
* 2 | rightIndex | int | Store index of right operand
* -----
* 3 | stack | String[] | Store the expression after dividing it along the spaces
* -----
* 4 | op | String | Store the operator name
* -----
* 5 | i | int | Counter variable
* -----
* 6 | left | int | Store the left operand
* -----
* 7 | right | int | Store the right operand
* -----
*
*                                     < ExpressionParser.adjustNumberSpacing(String) >
*                                     < ExpressionParser
*                                     .addVariable(String, int, char, char) >
*
* -----
* Serial no. | Variable name | Data type | Purpose
* -----
* 1 | tmp | int | Temporary variable, store the position of the opening bracket
* -----
*/

/*
* src/com/github/sahasatvik/math/MathParser.java
*                                     < MathParser >
*                                     < MathParser.isNumber(String) >
*                                     < MathParser.factorial(double) >
*
* -----
* Serial no. | Variable name | Data type | Purpose
* -----
* 1 | n | double | Counter for multiplying to get the factorial
* -----
*
*                                     < MathParser
*                                     .solveBinaryOperation(double, String, double) >
*
* -----
* Serial no. | Variable name | Data type | Purpose
* -----
* 1 | result | String | Store the evaluated result
* -----
*
*                                     < MathParser
*                                     .solveUnaryFunction(String, double) >
*
* -----
* Serial no. | Variable name | Data type | Purpose
* -----
* 1 | result | String | Store the evaluated result
* -----
*/

/*
* src/com/github/sahasatvik/math/ExpressionParserException.java

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*                                     < ExpressionParserException >
* -----
* Serial no. | Variable name | Data type | Purpose
* -----
* 1          | faultyExpression | String    | Store the invalid
*          |                  |           | expression
* -----
*                                     < ExpressionParserException
*                                     .ExpressionParserException(String) >
*                                     < ExpressionParserException
*                                     .getFaultyExpression() >
*/
/*
src/com/github/sahasatvik/math/NullExpressionException.java
    < NullExpressionException >
    < NullExpressionException
    .NullExpressionException() >
*/
/*
src/com/github/sahasatvik/math/UnmatchedBracketsException.java
    < UnmatchedBracketsException >
    -----
    Serial no. | Variable name | Data type | Purpose
    -----
    1          | pos          | int       | Store the index of the
             |              |           | unmatched bracket
    -----
    < UnmatchedBracketsException
    .UnmatchedBracketsException(String, int) >
    < UnmatchedBracketsException
    .getIndexOfBracket() >
*/
/*
src/com/github/sahasatvik/math/MissingOperandException.java
    < MissingOperandException >
    -----
    Serial no. | Variable name | Data type | Purpose
    -----
    1          | op           | String    | Store the operator
             |              |           | which has a missing
             |              |           | operand
    -----
    < MissingOperandException
    .MissingOperandException(String, int) >
    < MissingOperandException
    .getOperator() >
*/
/*
src/com/github/sahasatvik/math/VariableNotFoundException.java
    < VariableNotFoundException >
    -----
    Serial no. | Variable name | Data type | Purpose
    -----
    1          | var          | String    | Store the name of the
             |              |           | unrecognized variable
    -----
    < VariableNotFoundException
    .VariableNotFoundException(String, String) >
    < VariableNotFoundException
    .VariableNotFoundException(String) >
    < VariableNotFoundException
    .getVar() >
*/

```

```

* src/com/github/sahasatvik/math/FunctionNotFoundException.java
*
*
* -----
* Serial no. | Variable name | Data type | Purpose
* ~~~~~
* 1 | func | String | Store the name of the
* | | | | unrecognized function
* ~~~~~
*
* < FunctionNotFoundException
* .FunctionNotFoundException(String, String) >
* < FunctionNotFoundException
* .FunctionNotFoundException(String) >
* < FunctionNotFoundException
* .getFunc() >
*/

```