

# ArithmeticEvaluationEngine package

## Class **ArithmeticEvaluationEngine**

- public static Number **calculate** ( String Equation )
- public **ArithmeticEvaluationEngine** ( String Equation, Class DataType ) throws Exception
- public Number **Value** ()
- public void **setVariables** ( String s, Number n )
- public ArrayList<String> **getVariables** ()

Import this library by statement: **import ArithmeticEvaluationEngine.\*;**

## Static Function

 public static **calculate** ( String Equation )

```
Double value;  
value =  
ArithmeticEvaluationEngine.calculate("10^3*(2-5/1)+[12.45%1+2]");
```

## Creating Object and using it's functionalities

 public **ArithmeticEvaluationEngine** ( String Equation, Class DataType )

```
ArithmeticEvaluationEngine aee =  
    new ArithmeticEvaluationEngine("a+2*b-10",Double.class);
```

Second Parameter **Class DataType** supports following values:

- Integer.class
- Double.class
- Float.class
- Short.class
- Byte.class

✚ public void **setVariables** ( String s, Number n )

```
ae.setVariable("a", 5);  
ae.setVariable("b",10);
```

✚ public ArrayList<String> **getVariables** ()

```
ArrayList<String> vars;  
vars = ae.getVariables()
```

```
---output-----  
[a,b]  
-----
```

**java.util.ArrayList** needs to be imported to use this function.

✚ public Number **Value** ()

```
Double ans;  
Ans = (Double) ae.Value();  
System.out.println(ans);
```

```
---output-----  
15  
-----
```

## Test Package directly

Open terminal/command prompt and enter following command:

```
java ArithmeticEvaluationEngine.ArithmeticEvaluationEngine
```

Program will ask to enter expression.

Enter it and get it evaluation.

Variables are not supported here.

To run with debug/trace enter above command with **-trace** as argument.