

Console based Irrational Number Calculator

This document contains the answer of following questions:

- How to execute the calculator?
- How to use the calculator?
- What kind of arithmetic expression can be evaluated using this calculator?
- Where the evaluated result is shown?
- How do I know if there is any result stored on memory or not?

How to execute the calculator?

Open command prompt, locate to the Calculator.jar and type following command:

```
> java -jar Calculator.jar
```

How to use the calculator?

1. Upon executing Calculator.jar, you will be provided the following list of functions that you can use with this calculator:

Basic Functions:

Press 1: To evaluate an arithmetic expression.

Silver Ratio Number Functions:

Press 2: To calculate the value of the silver ratio number up to certain precision.

Silver Ratio Number Application Functions:

Press 3: To calculate an area of a regular octagon with given side length.

Memory Functions:

Press 4: To store the displayed value to the memory for later use.

Press 5: To recall the value stored in memory.

Press 6: To clear the memory.

Other:

Press 0: To Switch Off.

See below screen shot:

```
Sams-MacBook-Pro:SOEN-6481 Samir$ java -jar Calculator.jar
** The Irrational Number Calculator **

-----RESULT DISPLAY-----
0
-----

# Basic Functions:
# -----
# Press 1: To evaluate an arithmetic expression.
#
# Silver Ratio Number Functions:
# -----
# Press 2: To calculate the value of the silver ratio number up to certain precision.
#
# Silver Ratio Number Application Functions:
# -----
# Press 3: To calculate an area of a regular octagon with given side length.
#
# Memory Functions:
# -----
# Press 4: To store the displayed value to the memory for later use.
# Press 5: To recall the value stored in memory.
# Press 6: To clear the memory.
#
# Other:
# -----
# Press 0: To Switch Off.
#
# Please enter your choice:
█
```

2. Then, you need to supply your choice from the displayed list.
3. You will be prompted for further input based on the function you have selected.

What kind of arithmetic expression can be evaluated using this calculator?

You can provide any valid arithmetic expression to be evaluated.

For example:

$15 + 9 * 10$
 $6.7 * 7 + 3.89$
 $89 * 7 + 150$
 $750 * (6 + 15)$
 $34 * (5 + 754) / 14$

You can use the Silver Ratio Number as an operand in your arithmetic expression.

Use the letter "S" in your expression for the silver ratio number, if you want to use the silver ratio number in your expression.

For example:

$S * (6 + 15)$
 $34 * (5.7 + S) / 14$

Where the evaluated result is shown?

The result is shown at "Result Display"

For example:

```

-----RESULT DISPLAY-----
2.4142135623
-----

# Basic Functions:
# -----
# Press 1: To evaluate an arithmetic expression.
#
# Silver Ratio Number Functions:
# -----
# Press 2: To calculate the value of the silver ratio number up to certain precision.
#
# Silver Ratio Number Application Functions:
# -----
# Press 3: To calculate an area of a regular octagon with given side length.
#
# Memory Functions:
# -----
# Press 4: To store the displayed value to the memory for later use.
# Press 5: To recall the value stored in memory.
# Press 6: To clear the memory.
#
# Other:
# -----
# Press 0: To Switch Off.
#
# Please enter your choice:
█

```

How do I know if there is any result stored on memory or not?

The memory indicator tells you if there is any result stored in memory or not. Memory indicator appears if there is any result stored in memory, otherwise disappears. Please note that there are already functions to store and restore result from memory.

```

-----RESULT DISPLAY-----
2.4142135623
-----

-----MEMORY HAS RESULT----- ← Memory Indicator

# Basic Functions:
# -----
# Press 1: To evaluate an arithmetic expression.
#
# Silver Ratio Number Functions:
# -----
# Press 2: To calculate the value of the silver ratio number up to certain precision.
#
# Silver Ratio Number Application Functions:
# -----
# Press 3: To calculate an area of a regular octagon with given side length.
#
# Memory Functions:
# -----
# Press 4: To store the displayed value to the memory for later use.
# Press 5: To recall the value stored in memory.
# Press 6: To clear the memory.
#
# Other:
# -----
# Press 0: To Switch Off.
#
# Please enter your choice:
█

```