Kung-Fu Programmers

Boolean Expression Evaluator
Use Case Document

Version 1.0

Revision History

Date	Version	Description	Author
24/Mar/2024	1.0	Initial publishing	Schmidt, Stephen

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Use Case Document

1. Introduction

1.1 Purpose

The purpose of the *Use Case Document* is to define the use cases for the Boolean Expression Evaluator. It describes the defined use cases and provides a UML Use Case diagram as a visual aid.

The following people use the *Use Case Document*:

- The **configuration manager** uses it to define the design of the BEX.

1.2 Scope

This *Use Case Document* describes the basic functionality to be designed into the Boolean Expression Evaluator project.

1.3 Definitions, Acronyms, and Abbreviations

See the Project Glossary.

1.4 References

For the **Use Case Document**, the list of referenced artifacts includes:

- Software Requirements Specifications

1.5 Overview

This *Use Case Document* contains the following information:

Use Cases	—	provides a description of the project's use cases.
Use Case Diagram	—	provides a visual description of the project’s use cases.

2. Use Cases

2.1 Use Case 1

As a **user** I want to **enter a Boolean expression** so that **the solution to the expression is presented**.
Outline:

1. Select "Evaluate Expression."
2. Enter Boolean expression.
3. Receive the solution to the expression as output.

Basic Flow:

1. The user enters a Boolean expression.
   a. The use case starts when the user enters a Boolean expression using predefined characters.
2. The user receives the solution to the Boolean expression.
   a. The system evaluates the expression and outputs the solution on the screen.

Alternative Flows:

A1 Error in expression syntax.
   a. If the user makes an error in the syntax of the Boolean expression, the system will present an error message explaining the syntactic snafu.

2.2 Use Case 2

As a **user** I want to **set a Boolean-valued variable** so that **the variable can be used in expressions**.
Outline:

1. Select "Add Variable."
2. Choose character to represent the variable.
3. Set Boolean value of the variable.

Basic Flow

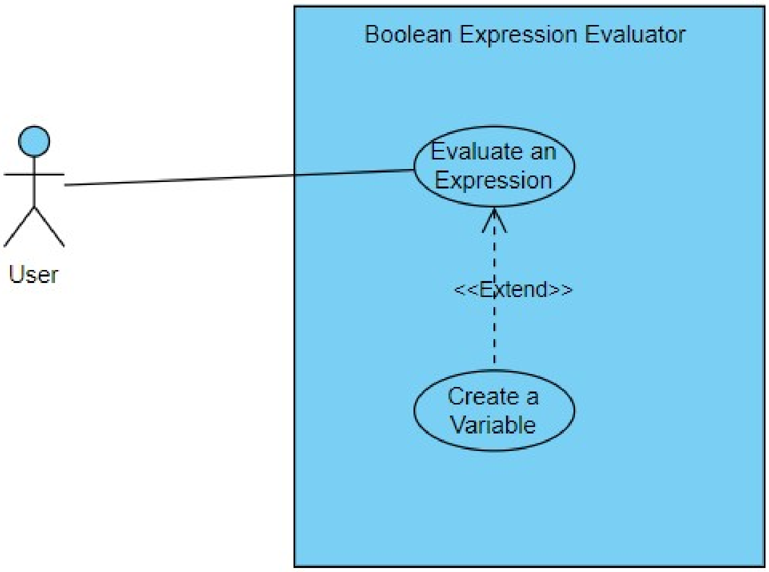
1. The user selects "Add Variable" from the main screen.
   a. The use case starts when the user selects "Add Variable."
2. The user chooses a character to represent the variable.
   a. The user can enter any character from their keyboard that is not already taken by the system.
3. The user sets the Boolean value of the variable.
   a. The user can enter T for true or F for false to set the value of the variable.

Alternative Flow

A1 User changes current variable.
   a. The user can choose an already defined variable and change its Boolean value. If the user enters 0, the variable will be deleted.

3. Use Case Diagram

3.1 UML Use Case Diagram


Boolean Expression Evaluator
User
Evaluate an Expression
<<Extend>>
Create a Variable