

README FILE

ASSIGNMENT DESCRIPTION:

This program checks whether the Unification Algorithm unifies with occurs check.

Here, we are declaring variables are in uppercase letters, and whereas the constants and functions as lowercase letters.

Process To run the program:

This program has been developed using Eclipse IDE for Java Developers. It does not require any of the other packages.

The assignment.java program file should be compiled. After running the program, the console will ask to enter the input expressions.

Then the program will unify these arguments and if the expression is solved then it displays that the given expression is unified. If not, it displays a message that the given expression cannot be unified.

Examples:

(1) Please enter the first expression

X

Please enter the second expression

a

Output:

X=a

Given Expressions is unified

(2) Please enter the first expression

Y

Please enter the second expression

X

Output:

Y=X

Given Expressions is unified

(3) Please enter the first expression

X

Please enter the second expression

f(Y)

Output:

$X = f(Y)$

Given Expressions is unified

(4) Please enter the first expression

X

Please enter the second expression

h(a,Y)

Output:

$X = h(a,Y)$

Given Expressions is unified

(5) Please enter the first expression

f(f(X,Y),X)

Please enter the second expression

f(f(V,U),g(U,Y))

Output:

$V = g(U,U)$

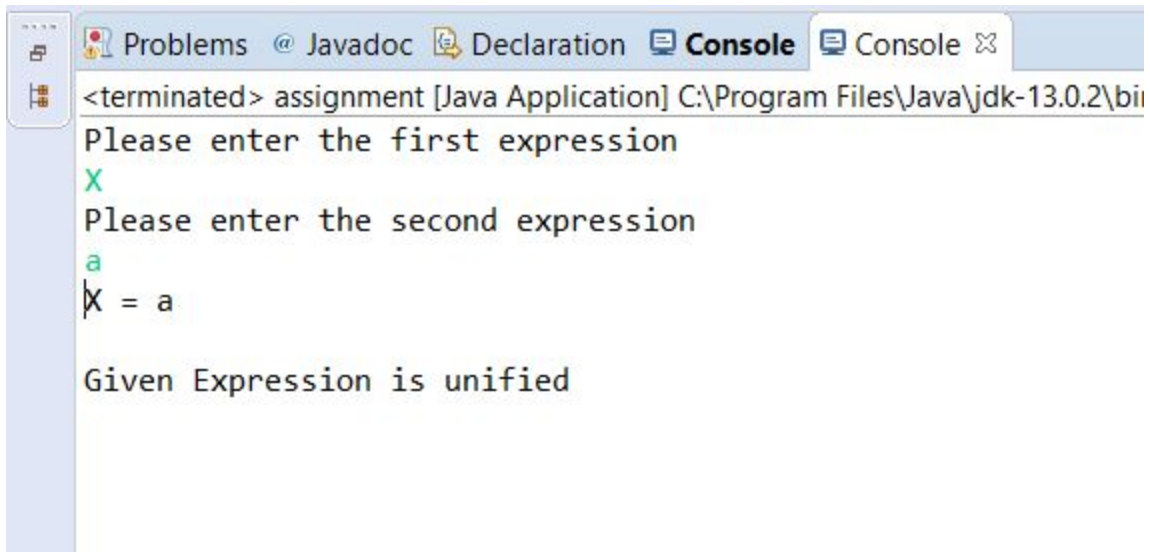
$X = g(U,U)$

$Y = U$

Given Expressions is unified

Screenshot:

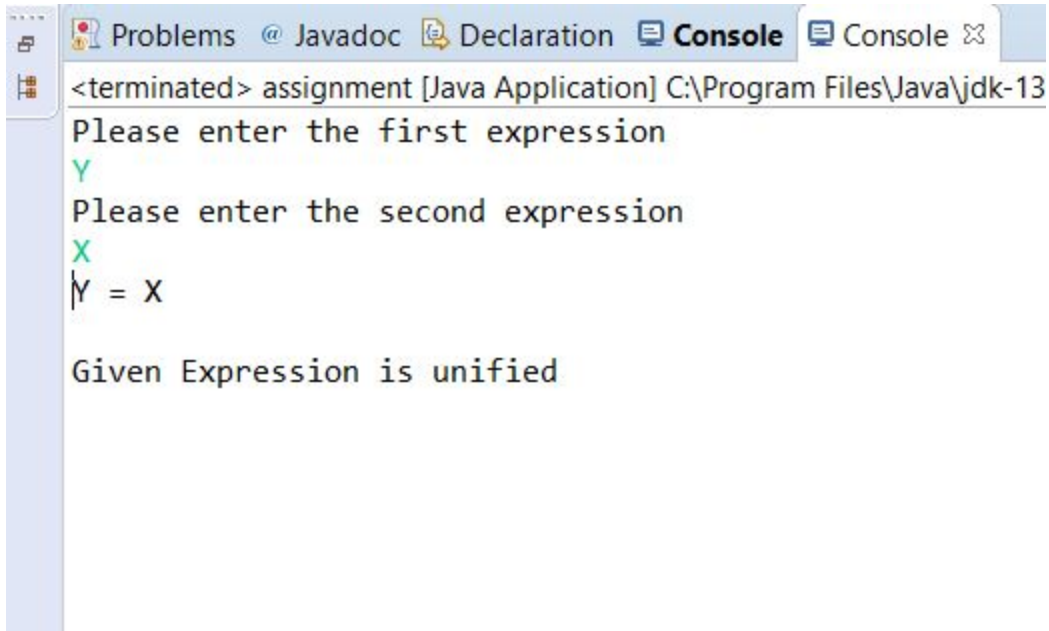
1.



```
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-13.0.2\bin
Please enter the first expression
X
Please enter the second expression
a
X = a

Given Expression is unified
```

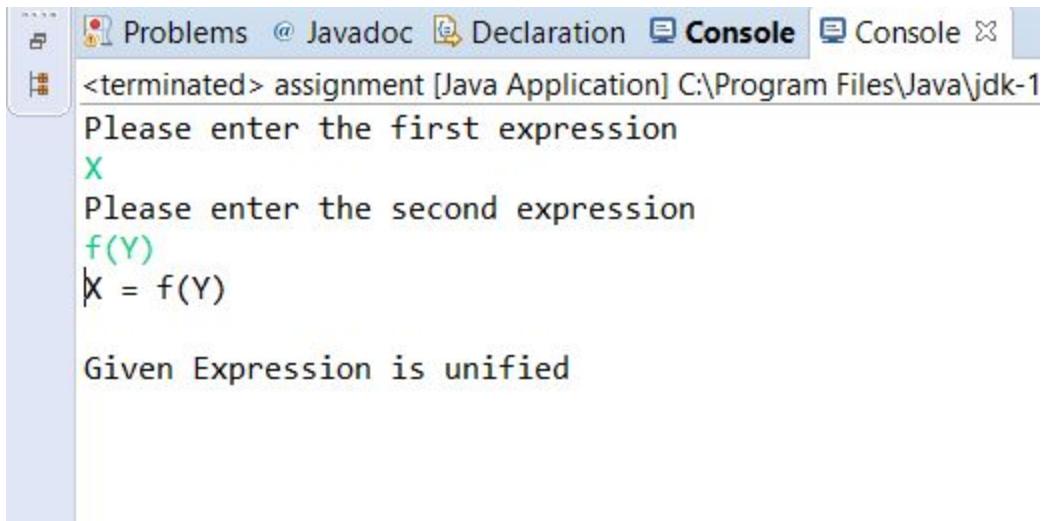
2.



```
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-13
Please enter the first expression
Y
Please enter the second expression
X
Y = X

Given Expression is unified
```

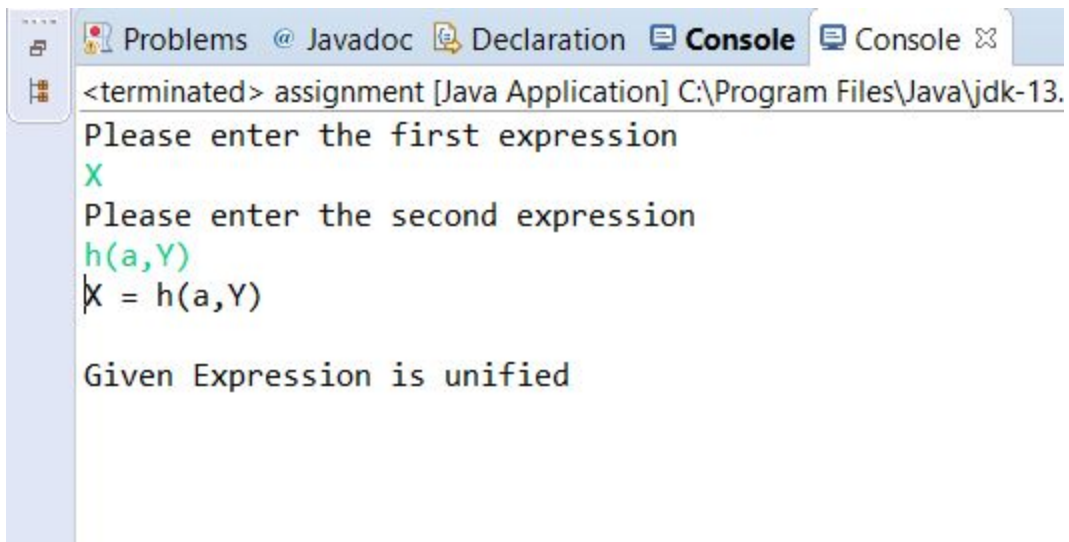
3.



```
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-1
Please enter the first expression
X
Please enter the second expression
f(Y)
X = f(Y)

Given Expression is unified
```

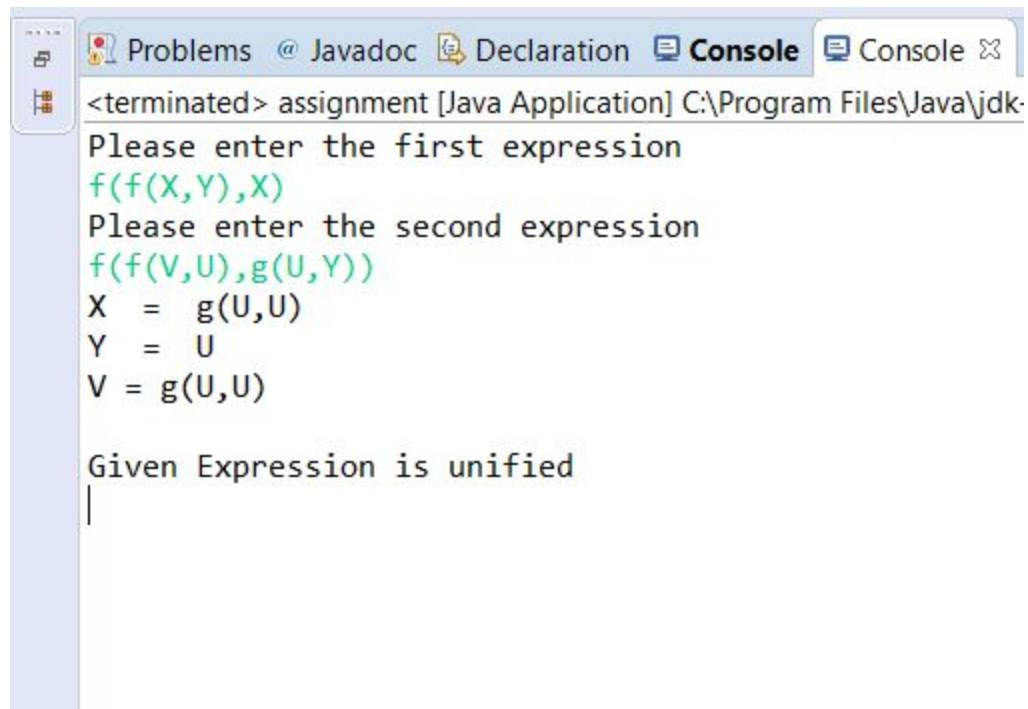
4.



```
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-13.
Please enter the first expression
X
Please enter the second expression
h(a,Y)
X = h(a,Y)

Given Expression is unified
```

5.



The screenshot shows a Java IDE window with a console tab. The console output is as follows:

```
<terminated> assignment [Java Application] C:\Program Files\Java\jdk-  
Please enter the first expression  
f(f(X,Y),X)  
Please enter the second expression  
f(f(V,U),g(U,Y))  
X = g(U,U)  
Y = U  
V = g(U,U)  
  
Given Expression is unified  
|
```

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