COMP 410
Fall 2019

Unification in Prolog

For each of the unification attempts below, state:

- Whether or not the unification succeeds
- If the unification succeeds, state the values of each variable

1.) `1 = 1`

2.) `1 = 2`

3.) `X = 27`

4.) `1 = X`

5.) `X = foo`

6.) `foo = bar`

7.) `1 = baz`

8.) `foo(1) = foo(1)`

9.) `foo(1) = foo(2)`

10.) `foo(X) = foo(1)`

11.) `foo(1) = foo(X)`

12.) `foo(1) = foo(1, 2)`

13.) `foo(X, Y) = foo(1)`

14.) `foo(X, Y) = foo(1, 2)`

15.) `foo(1, Y) = foo(X, 2)`

16.) `foo(1, 2) = foo(X, X)`

17.) `foo(bar(X), Y) = foo(Z, bar)`

18.) `foo(bar(X), foo(Y)) = foo(foo(1), foo(2))`

19.) `foo(bar(X), foo(2)) = foo(bar(3), foo(Y))`

20.) `foo(bar(X), X) = foo(Y, 2)`

21.) `foo(1, foo(2, foo(3, bar))) = foo(1, foo(2, foo(bar)))`