

**CS 421/820**  
**Assignment 1 Prolog : The Unification Algorithm**  
**Total: 100 pts**  
Dr. Malek Mouhoub

Write a program that implements the unification algorithm seen in class. Your program should have the same behavior as the `unify_with_occurs_check(term1,term2)` build-in predicate of Gnu Prolog. `term1` and `term2` are 2 terms where:

- variables are in upper case letters
- function symbols are in lower case letters

## Examples

```
|?- unify_with_occurs_check(a,X).  
X = a  
yes  
| ?- unify_with_occurs_check(X,Y).  
Y = X  
yes  
| ?- unify_with_occurs_check(X,f(Y)).  
X = f(Y)  
yes  
| ?- unify_with_occurs_check(X,h(a,Y)).  
X = h(a,Y)  
yes  
| ?- unify_with_occurs_check(f(f(X,Y),X),f(f(V,U),g(U,Y))).  
V = g(U,U)  
X = g(U,U)  
Y = U
```