

Homework # 10

due Monday, April 13, 11:00 AM

1 Parameters

Do exercise 6 on page 384 by completing the Java program `ParameterTest.java` in `$CLASSHOME/src/homework10/` but skip 6(d) (macro expansion).

Answer the following questions in a file `README`:

- There is more than one possibility for value-result parameters. Why?
- Why does it not make sense to implement macro-expansion in the test?

2 Simple Prolog Programs

Solve Exercises 10,11 on page 415. Also define a predicate `mingle` that takes three arguments and returns true if the third can be created by mingling the elements of the first two together while preserving relative order:

```
?- mingle([1,2],[3],[3,1,2]).
Yes
?- mingle([1,2],[3],[1,3,2]).
Yes
?- mingle([1,2],[3],[3,2,1]).
No
?- mingle(X,Y,[1,2]).
```

```
X = [1, 2]
Y = [] ;
```

```
X = [1, 2]
Y = [] ;
```

```
X = [1, 2]
Y = [] ;
```

```
X = [1]
Y = [2] ;
```

```
X = [2]
Y = [1] ;
```

```
X = [2]
Y = [1] ;
```

```
X = []
Y = [1, 2] ;
```

```
No
```

As this example shows, it is permitted to yield the same results more than once. Also, you can assume that either the first or the last argument is a fixed length list. The code for `mingle` as well as the answers to Exercises 10 and 11 should go into `homework10.pl` in your `homework10` directory of your AFS volume.