

# Miscellaneous utilities

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## Contents

Reminder : all builtin functions can be found documented here

### Exporting definitions

```
'defX { 1 dupn swap def export } def 'defX export
```

### Navigating the environment

```
'show-context {  
  "" hypotheses  
  { dup variable type swap "%s : %v\n%s" format } each  
  print pop  
} defX  
'showdef { pattern-index 1 swapn swap index-insert set-pattern-index } defX  
'vis { show-context "-----\n" printf show-stack } defX
```

### Binders and contexts

```
'binder { 2 shaft { ${ swap } -> ${ } ${ } } } defX  
'funs { swap reverse { swap '! $ binder } each exec } defX  
'prods { swap reverse { swap '? $ binder } each exec } defX  
'# { swap cons } defX
```

### Constructing typed terms

```
'Type { 0 universe pull } defX  
'forall { { extro-forall } swap times } defX  
'lambdas { { extro-lambda } swap times } defX  
'appls { range { pop apply } each } defX  
'applyl { { swap apply } each } defX  
'recursor { dup 2 shaft -> variable mu ! } defX
```

```
'( '[ $ defX
') { ] applyl } defX
```

### Managing the type environment

```
'-> { dup 1 swapn swap intro { ,{ dup } variable pull } def } defX
'! 'extro-lambda $ defX
'? 'extro-forall $ defX
```

### Defining inductive constructors

```
'defconstr { 1 dupn swap showdef def } defX
```

### Acting on list as stacks

```
'in-list {
  swap {
    ,{ } set-stack ${ }
    { ,{ ,{ stack } } set-stack ,{ stack } } exec
  } exec
} defX
```