# deepreplace.m Examples

If you are unable to run this live script, please see *examples.pdf* instead.

## Example 1

Change the date format of text in a cell array containing mixed data types. As the number of elements in `REPLACEMENT` is the same as `MATCH`, matches are replaced by their corresponding replacement, i.e. `"-"` with `"/"` and `"2022"` with `"22"`.

```
DATA = { '2022-12-8', 5; '2022-12-9', 9 };
MATCH = [ "-", "2022" ];
REPLACEMENT = [ "/", "22" ];
deepreplace( DATA, MATCH, REPLACEMENT )
```

```
ans = 2×2 cell
```

| | 1 | 2 |
|---|---|---|
| 1 | '22/12/8' | 5 |
| 2 | '22/12/9' | 9 |

## Example 2

Replace username tags in a structure of directories and pass to a function.

```
username = 'Default';
Directories.matlab = { 'C:\Program Files\MATLAB', ...
    'C:\Users\<user>\Documents\MATLAB' };
Directories.labrat = 'C:\Users\<user>\Documents\LABRAT';
Directories = deepreplace( Directories, '<user>', username )
```

```
Directories = struct with fields:
    matlab: {'C:\Program Files\MATLAB'  'C:\Users\Default\Documents\MATLAB'}
    labrat: 'C:\Users\Default\Documents\LABRAT'
ans = 1×3 logical array
   1   1   0
```

```
directoriesCell = struct2cell( Directories );
isfolder( [directoriesCell{:}] )
```

## Example 3

Redact personal information by replacing text in a nested structure array. A pattern array is used to match either single digits or letter sequences of any lengths, e.g., words. As `REPLACEMENT` is a scalar, text matching either of these patterns is replaced with #.

```
DATA = struct( 'name', 'Jane', 'contact', ...
  struct('phone', '020 7219 3000', 'mobile', '07911 123456') );
DATA(2) = struct( 'name', 'John', 'contact', ...
  struct('phone', '0303 123 7300', 'mobile', '+44 7975 777666') );
MATCH = [ digitsPattern(1) lettersPattern ];
REPLACEMENT = '#';
```

```
NEWDATA = deepreplace( DATA, MATCH, REPLACEMENT );
NEWDATA(1), NEWDATA(1).contact, NEWDATA(2), NEWDATA(2).contact
```

```
ans = struct with fields:
       name: '#'
    contact: [1×1 struct]
ans = struct with fields:
     phone: '### #### ####'
    mobile: '##### ######'
ans = struct with fields:
       name: '#'
    contact: [1×1 struct]
ans = struct with fields:
     phone: '#### ### ####'
    mobile: '+## #### ######'
```

## Example 4

Only text in the input data will be replaced. Other data types will be returned unchanged.

```
DATA = [ 10 20 30 40 ];
MATCH = "0";
REPLACEMENT = "";
deepreplace( DATA, MATCH, REPLACEMENT )
```

```
ans = 1×4
    10    20    30    40
```