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Spelunking / **Spelunking.m**

szhorvat Copy names as unquoted text.

6105c4d   on Feb 20, 2014

2 contributors

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68 lines (54 sloc)   2.32 KB

```
 1    (* ::Package:: *)
 2
 3    (*
 4     * Original code by Simon Woods.
 5     * See http://mathematica.stackexchange.com/a/15948
 6     *
 7     *)
 8
 9    BeginPackage["Spelunking`"];
10
11    Spelunk::usage = "Spelunk[symbol] will discover the definition of symbol.  Underlined symbols in the output are clickable.";
12
13    Begin["`Private`"];
14
15    defboxes[symbol_Symbol] := Hold[symbol] /. _[sym_] :>
16            If[MemberQ[Attributes[sym], Locked], "Locked",
17              Internal`InheritedBlock[{sym},
18                Unprotect[sym]; ClearAttributes[sym, ReadProtected];
19                Quiet@Check[ToBoxes[Definition@sym], "DefError"] /.
20                InterpretationBox[a_, b___] :> a ]];
21
22    defboxes[s_String] := defboxes[#] &@ToExpression[s, InputForm, Unevaluated]
23
24    prettyboxes[boxes_] :=
25      boxes /. {" "} -> {"\n----------\n"} //. {RowBox[{left___, ";",
26          next : Except["\n"], right___}] :>
27        RowBox[{left, ";", "\n", "\t", next, right}],
28        RowBox[{sc : ("Block" | "Module" | "With"), "[",
29          RowBox[{vars_, ",", body_}], "]"}] :>
30        RowBox[{sc, "[", RowBox[{vars, ",", "\n\t", body}], "]"}]};
31
32    fancydefinition[symbol_Symbol] :=
33      Cell[BoxData[
34        prettyboxes[
35         defboxes[symbol] /.
36          s_String?(StringMatchQ[#, __ ~~ "`" ~~ __] &) :>
37           First@StringCases[s,
38             a : (__ ~~ "`" ~~ b__) :> processsymbol[a, b]]]],"Output",
39       ShowStringCharacters -> True,
40       Background -> RGBColor[1, 0.95, 0.9],
41       CellGroupingRules->"OutputGrouping",
42       GeneratedCell->True,
43       CellAutoOverwrite->True,
44       ShowAutoStyles->True,
45       LanguageCategory->"Mathematica",
46       FontWeight->"Bold"
47       ];
48
49    processsymbol[a_, b_] := Module[{db},
50      Which[
51       ! StringFreeQ[a, "\""], a,
52       ! StringFreeQ[a, "_"] || (db = defboxes[a]) === "Null",
53       TooltipBox[b, a],
54       db === "Locked", TooltipBox[b, a <> "\nLocked Symbol"],
55       db === "DefError", TooltipBox[b, a <> "\nError getting Definition"],
56       True, ActionMenuBox[TooltipBox[StyleBox[b, FontVariations->{"Underline"->True}], a], {"Discover function" :> Spelunk[a], "Co
57                       DefaultBaseStyle -> {"Input"}, Appearance->"None", Evaluator -> Automatic]
58       ]]
```

```
59
60    Spelunk[symbol_Symbol] := CellPrint[fancydefinition[symbol]];
61
62    Spelunk[s_String] := CellPrint[fancydefinition[#] &@ToExpression[s, InputForm, Unevaluated]];
63
64    SetAttributes[{defboxes, fancydefinition, Spelunk}, HoldFirst]
65
66    End[];
67
68    EndPackage[];
```