

Pensieve header: Makefile for Agenda, Confessions, and Monoblog.

```
SetDirectory["C:\\drorbn\\AcademicPensieve\\Projects\\Agenda"]
```

```
C:\\drorbn\\AcademicPensieve\\Projects\\Agenda
```

Make

```
Make::usage =
  "Make[targets, sources, Hold[action]] makes a target, or a list of targets, given sources,
  or a list of sources, in the style of the unix 'make' command.";
Make[target_String, sources_, action_Hold] := Make[Evaluate@{target}, sources, action];
Make[targets_, source_String, action__Hold] := Make[targets, Evaluate@{source}, action];
Make[targets_List, sources_List, action_Hold] := Module[{},
  If[
    (And @@ ((FileType[#] != None) & /@ sources)) &&
    Or[
      Or @@ ((FileType[#] === None) & /@ targets),
      Min[AbsoluteTime[FileDate[#]] & /@ targets] < Max[AbsoluteTime[FileDate[#]] & /@ sources]
    ],
    Print["Making ", targets, " ..."];
    ReleaseHold[action]
  ]
];
```

Confessions

```

TeX2HTML[s_String] := StringReplace[s, {
  "\\href{" ~ u___ ~ "}" {" ~ L___ ~ "}" => "<a href=" <u <> ">" <L <> "</a>",
  (* LaTeX from http://
  stackoverflow.com/questions/8160514/is-there-css-for-typesetting-the-latex-logo-in-html *)
  "\\LaTeX" ->
  "L<sup style=\\\"text-transform: uppercase; font-size: 0.85em; vertical-align: 0.15em;
  margin-left: -0.36em; margin-right: -0.15em;\\\">a</sup>T<sub
  style=\\\"text-transform: uppercase; vertical-align: -0.5ex; margin-left:
  -0.1667em; margin-right: -0.125em; font-size: 1em;\\\">e</sub>X",
  "\\\"a" -> "&auml;", "\\\"o" -> "&ouml;",
  "\\\"u" -> "&uuml;", "\\\" " -> "\\\"\"", "'\"' -> "\\\"\"", "\\ \" -> \" \", "\\\" -> "\\\"\\\"\"
  }];
If[FileType["Confessions.js"] === None || (
  FileType["Confessions.js"] === File &&
  OrderedQ[{FileDate["Confessions.js"], FileDate["Confessions.tex"]}]},
Print["Projects/Agenda: Making Confessions.js ..."];
cs = TeX2HTML /@ StringCases[
  Import["Confessions.tex", "text"],
  Shortest["\\conf{" ~ c___ ~ "\\fnoc}"] => c
  ];
If[FileType["Confessions.js"] != None, DeleteFile["Confessions.js"]];
WriteString["Confessions.js",
  "var Confessions = [\n \\" <> StringJoin@@Riffle[cs, "\",\n \\" <> "\\\"\\n];"
  ];
Close["Confessions.js"];
];

```

Agenda

```

dpi = 200;
PageName[k_Integer] := StringPadLeft[ToString[k], 2, "0"] <> ".png";
Make[k_Integer, src_] := Make[{k}, src];
Make[{ks_Integer}, src_] := Make[
  Thread[Rule[Range[Length[{ks}]], {ks}]],
  src
  ];
Make[pr_Rule, src_] := Make[{pr}, src]; (* pr: page rule *)
Make[prs_List, src_] := (* prs: page rules *)
Module[
  {
    f, t, ff, tt,
    ds, (* for dates changed *)
    MT (* for Make Thumb *)
  },
  If[FileType[src] === File,
    ds = Table[
      tt = "Projects/Agenda/" <> PageName[Last[pr]];
      If[FileType[tt] === None, 0, AbsoluteTime[FileDate[tt]]
    ],
  ];

```

```

    {pr, prs}
  ];
If[Min[ds] < AbsoluteTime[FileDate[src]],
  Print["Projects/Agenda: Running Make[" <> prs, ", ", src, "]"..."];
  Read["!convert -scene 1 -density " <> ToString[dpi] <>
    " -background white -alpha remove \" " <> src <> "\" Projects/Agenda/Temp.png"];
  If[FileType["Projects/Agenda/Temp.png"] === File,
    RenameFile["Projects/Agenda/Temp.png", "Projects/Agenda/Temp-1.png"]
  ]
];
Cases[prs, (f_ -> t_) => (
  ff = "Projects/Agenda/Temp-" <> ToString[f] <> ".png";
  tt = "Projects/Agenda/" <> PageName[t];
  MT := (MakeThumb[PageName[t]]; MakePreview[PageName[t]]);
  Which[
    FileType[ff] === File && FileType[tt] === File, DeleteFile[tt]; RenameFile[ff, tt]; MT,
    FileType[ff] === File && FileType[tt] === None, RenameFile[ff, tt]; MT,
    FileType[ff] === None && FileType[tt] === None, (
      Print["Projects/Agenda: Making an empty ", t, ".png..."];
      Export[tt, Rasterize[Image[{{1}}, ImageSize -> {8.5, 11} dpi]]];
      MT
    )
  ]
)];
DeleteFile /@ FileNames["Projects/Agenda/Temp-*.png"]
];
Make["Agenda.png", K_Integer] := Module[{k, fk, ds, rows},
  SetDirectory["Projects/Agenda"];
  ds = Table[
    fk = PageName[k];
    If[FileType[fk] === None, 0, AbsoluteTime[FileDate[fk]]],
    {k, K}
  ];
  If[FileType["Agenda.png"] === None || Max[ds] > AbsoluteTime@FileDate["Agenda.png"],
    rows = First@Ordering[Table[Abs[Log[ $\frac{9}{16} \frac{8.5 \text{ Ceiling}[K / \text{rows}]}{11 \text{ rows}}$ ]]], {rows, K}]];
    Print["Projects/Agenda: Making Agenda.png: " <>
      ToString[K] <> " pages in " <> ToString[rows] <> " rows..."];
    Read[StringJoin[
      "!montage -background white -geometry ",
      ToString[8.5 dpi] <> "x" <> ToString[11 dpi],
      "+0+0 -quality 90 -tile " <> ToString[Ceiling[K / rows]] <> " ",
      StringJoin@@ Table[PageName[k] <> " ", {k, K}],
      "Agenda.png"
    ]];
    MakeThumb@"Agenda.png"; MakePreview@"Agenda.png"
  ];

  ResetDirectory[]
];

```

```

SetDirectory["C:\\drorbn\\AcademicPensieve"];
k = 0;
Make[{{++k, ++k}, "Projects/Agenda/Confessions.pdf"];
Make[++k, "Projects/WK04/CheatSheetFreeLie.pdf"];
Make[1 -> ++k, "2013-11/DoubleTree/DoubleTree.pdf"];
Make[{{++k, ++k}, "Projects/MetaCalculi/MetaCalculi.pdf"];
Make[++k, "2015-09/Unitarity.pdf"];
Make[++k, "Projects/Agenda/CSQG.pdf"];
Make["Agenda.png", k];
ResetDirectory[];

```

Projects/Agenda: Making Agenda.png on 7 column s...

Retired Pages:

```

Make[++k, "2012-05/beta5.1/nb/SimplifyingTheExact.pdf"];
Make[++k, "Projects/OneCo-1606/OneCo-1606.pdf"];
Make[++k, "People/Chterental/CheatSheet-140808@.pdf"];
Make[{{++k, ++k}, "Classes/17-1350-AKT/About.pdf"];
Make[++k, "Classes/14-1100/CheatSheetGroups.pdf"];
Make[++k, "2014-07/CheatSheetBeta.pdf"];
Make[{{++k, ++k}, "2014-04/BF2C/BF2C.pdf"];
Make[++k, "2014-01/PlaneCurves.pdf"];
Make[++k, "Classes/14-1350-AKT/FeynmanDiagramsV2/FD.pdf"];
Make[++k, "Classes/14-1350-AKT/MissingLinks.pdf"];
Make[{{++k, ++k}, "2014-01/AbstractionChallenge@140108.pdf"];
Make[{{++k, ++k}, "Classes/14-1350-AKT/About.pdf"];
Make[++k, "2014-01/CheatSheetJ.pdf"];
Make[++k, "2017-09/Pushforwards.pdf"];
Make[{{++k, ++k, ++k, ++k}, "Projects/SL2Portfolio/SL2Portfolio.pdf"];
Make[{{++k, ++k, ++k}, "Projects/SL2Invariant/SL2Invariant.pdf"];
Make[++k, "Projects/OneCo-1604/OneCo.pdf"];
Make[++k, "2016-11/OneCo-1611.pdf"];
Make[{{++k, ++k}, "2017-01/one/Dancso_visit_summary.pdf"];
Make[++k, "Projects/UChair/UChair.pdf"];
Make[{{++k, ++k, ++k}, "Projects/SL2Portfolio2/SL2Portfolio2.pdf"];
Make[Table[++k, {6}], "Talks/UCLA-191101/DoPeGDO.pdf"];
Make[Table[++k, {15}], "Projects/Agenda/Monoblog.pdf"];

```

Monoblog

convert -scene 1 -density 200 -background white -alpha remove Monoblog.pdf scratch/M-%02d.png

```

dpi = 200;
Make [{"Monoblog.png", "Monoblog.html"}, {"Monoblog.pdf", "Monoblog.txt"}, Hold[
  Print["Projects/Agenda: Making Monoblog.png and Monoblog.html..."];
  $MonoblogPages = Import["Monoblog.pdf", "PageCount"];
  rows = First@Ordering[Table[
    Abs[Log[ $\frac{9}{16} \frac{8.5 \text{ Ceiling}[\$MonoblogPages / \text{rows}]}{11 \text{ rows}}$ ]],
    {rows, $MonoblogPages}
  ]];
  cols = Ceiling[$MonoblogPages / rows];
  DeleteFile[FileNames["scratch/M-*.png"]];
  Read["!convert -scene 1 -density " <> ToString[dpi] <>
    " -background white -alpha remove Monoblog.pdf scratch/M-%02d.png"];
  Read["!montage -geometry +0+0 -frame 0 -background white -tile " <>
    ToString[cols] <> "x" <> ToString[rows] <> " scratch/M-*.png Monoblog.png"];
  DeleteFile[FileNames["scratch/M-*.png"]];
  MakeThumb@"Monoblog.png"; MakePreview@"Monoblog.png";
  es1 = Get["Monoblog.pos"] // Most;
  es2 = es1 /. Entry[k_, id_, x_, y_] => If[x < 4.25,
    Entry[2 k - 1, id, x, 11 - y],
    Entry[2 k, id, x - 4.25, 11 - y]
  ];
  es3 = Flatten[Table[
    If[es2[[k, 1]] != es2[[k + 1, 1]] && es2[[k + 1, 4]] > 0.42,
      {
        Entry[es2[[k, 1]], es2[[k, 2]] <> "-1", {0, es2[[k, 4]] - 0.1}, {4.25, 11}],
        Entry[es2[[k, 1]] + 1, es2[[k, 2]] <> "-2", {0, 0}, {4.25, es2[[k + 1, 4]] + 0.1}]
      },
      Entry[es2[[k, 1]], es2[[k, 2]], {0, es2[[k, 4]] - 0.1},
        {4.25, If[es2[[k + 1, 4]] > es2[[k, 4]], es2[[k + 1, 4]] + 0.1, 11]}]
    ],
    {k, Length[es2] - 1}
  ];
  es4 = es3 /. Entry[k_, id_, {x1_, y1_}, {x2_, y2_}] => Module[{sx, sy},
    sx = 4.25 * Mod[k - 1, 2 cols]; sy = 11 * Quotient[k - 1, 2 cols];
    Entry[id, {sx + x1, sy + y1}, {sx + x2, sy + y2}]
  ];
  es5 = es4 /. Entry[id_, {x1_, y1_}, {x2_, y2_}] => StringJoin[" [", ToString[x1],
    ",", ToString[y1], ",", ToString[x2], ",", ToString[y2], "\", id, "\"];
  views = StringJoin@@Riffle[es5, "\n"];
  FileTemplateApply[FileTemplate["Monoblog.txt"], "Monoblog.html"];
  Print["...Monoblog.html: ", 1 + Length@es5, " views in ", rows, "x", cols, "."]
]]

```

index.html

```
{  
  "CleanTeX" → True,  
  "TitleNotes" → "This is the Pensieve home of <a href=Agenda.png>Agenda.png</a>, <a  
    href=Confessions.pdf>Confessions.pdf</a>, <a href=Monoblog.pdf>Monoblog.pdf</a>,  
    <a href=TDBID.pdf>TDBID.pdf</a>, and <a href=CSQG.pdf>CSQG.pdf</a>.<p>"  
}
```