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

C:\drorbn\AcademicPensieve\Projects\ExQu

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]
    ]
   ];
```

WordCloud

```
sources = {"ExQu.tex", "abstract.tex", "table.tex",
    "soft.tex", "dbd.tex", "specific.tex", "harder.tex", "beyond.tex"};
target = "WordCloud.png";

MakeWC[] := Module[{words, dict},
  words = Flatten[TextWords[ReadString[#]] & /@ sources];
  dict = Complement[DeleteStopwords[DictionaryLookup[]],
    {"begin", "end", "left", "right", "equation", "em"}];
  words = Select[words, MemberQ[dict, #] &];
  WordCloud[words, ImageSize → 400]
 ]
```

MakeWC[]

Make[target, Join[sources,{"index.nb"}], Hold[Export[target, MakeWC[]]]]

Making {WordCloud.png} ...

WordCloud.png

Output

```
{
 "TitleNotes" ->
  StringJoin["<div style=\"clear: right; float: right; padding: 8px; width:
     400px;\"><img width=400px src=WordCloud.png></div>\nThis is the
     construction page for my paper <b>Expansions and Quadraticity for
     Groups</b> (<a href=ExQu.pdf>PDF here</a>). <p><b>Abstract.</b> ",
    Import["abstract.txt"],
    "\n<p>"
   ]
}
```

{TitleNotes →

   <div style="clear: right; float: right; padding: 8px; width: 400px;"><img
      width=400px src=WordCloud.png></div>

This is the construction page for my paper Expansions and Quadraticity
      for Groups (PDF here). <p>Abstract.
      First year students learn that the Taylor expansion Z_T carries

functions into power series, and that it has some nice algebraic

properties (e.g. multiplicativity, $Z_T(fg)=Z_T(f)Z_T(g)$). It is less

well known that the same game can be played within arbitrary groups:

there is a natural way to say "a Taylor expansion Z for elements

of an arbitrary group G", and a natural way to carry the algebraic

properties of the Taylor expansion to this more general context. In the

case of a general G "Taylor expansions" (expansions with the same

good properties as Z_T) may or may not exist, may or may not be unique,

may or may not separate group elements, and a further good property which

is hidden in the case of Z_T, "quadraticity", may or may not hold.

<p>

The purpose of this expository note is to properly define all the

notions in the above paragraph, to enumerate some classes of groups

whose theory of expansions we either understand or wish to understand,

to indicate the relationship between these notions and the

notions of "finite type invariants" and "unipotent" and "Mal'cev"

completions, and to point out (with references) that our generalization

of "expansions" to arbitrary groups is merely the tip of an iceberg,

for almost everything we say can be generalized further to "expansions

for arbitrary algebraic structures".

<p>}