

# RDF123: Spreadsheets to RDF

- In 2007 we developed the RDF123 Java app to translate spreadsheets into RDF graphs
- Translation is driven by a map that permits
  - a rich schema to apply to each row, rather than just creating a single instance of a RDF/OWL class.
  - Conditionals allow different rows to use different schemata
- See <http://rdf123.umbc.edu/> for more info
- See [CSV on the Web: A Primer](#) for the W3C's work on developing a standard

# RDF123 Java Application

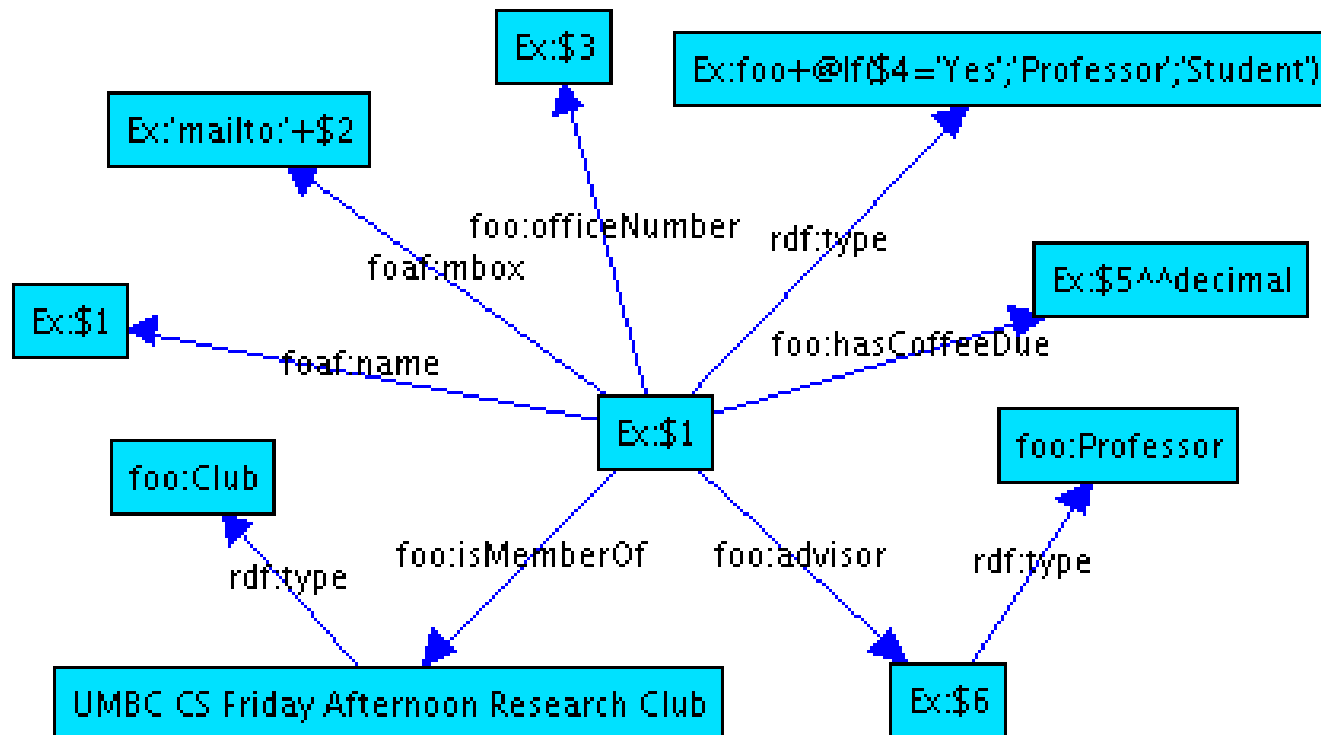
The screenshot displays the RDF123 Java Application interface. It features a main window titled "RDF123 Output Help" and several sub-windows:

- Prefix Definition:** Lists the following prefixes: rdf, foo, ob, emp, ethan, foaf, and dc.
- example1 - Spreadsheet:** A table with the following data:

	A	B	C	D
1	employee	email	phone	supervisor
2	mary smith	msmith@foo.com	410-455-1000	Bill Gates
3	Bob Jones	bjones@foo.com	410-455-1001	Bill Gates
4	Bill Gates	dtrump@foo.com	410-455-1002	Donald Trump
- Map in RDF Graph:** A graph visualization showing the following structure:
  - A central node (represented by a small square) is connected to:
    - `foaf:Person` (via `rdf:type`)
    - `rdf123:C1^^string` (via `foaf:name`)
    - `rdf123:C2^^string` (via `foaf:mbox`)
    - `rdf123:C3` (via `foaf:phoneNumber`)
    - `emp:supervisor` (via `emp:supervisor`)
  - The `emp:supervisor` node is connected to:
    - `foaf:Person` (via `rdf:type`)
    - `rdf123:C4^^string` (via `foaf:name`)
  - A separate node (represented by a small square with `<>`) is connected to:
    - `map123:Map` (via `rdf:type`)
    - `employee map file` (via `dc:title`)
    - `Lushan Han` (via `dc:creator`)

# RDF123 Example

Name	Email	Office	Faculty	Coffee Due	Advisor
Tim Finin	finin@umbc.edu	ITE329	Yes	\$10	
Lushan Han	lushan@umbc.edu	ITE377	No		Tim Finin
Wenjia Li	wenjia@umbc.edu	ITE377	No		Anupam Joshi



# RDF123 graph serialized as RDF/XML

```
<rdf:RDF
  xmlns:foaf="http://xmlns.com/foaf/0.1/"
  xmlns:foo="http://www.foo.org/"
  xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
  <foo:Club rdf:about="#UMBC CS Friday Afternoon Research Club"/>
  <rdf:Description rdf:about="Ex:$1">
    <rdf:type rdf:resource="Ex:foo+@If($4='Yes';'Professor';'Student')"/>
    <foaf:mbox>Ex:'mailto:'+$2</foaf:mbox>
    <foaf:name>Ex:$1</foaf:name>
    <foo:officeNumber>Ex:$3</foo:officeNumber>
    <foo:hasCoffeeDue>Ex:$5^^decimal</foo:hasCoffeeDue>
    <foo:advisor>
      <foo:Professor rdf:about="Ex:$6"/>
    </foo:advisor>
    <foo:isMemberOf rdf:resource="#UMBC CS Friday Afternoon Research Club"/>
  </rdf:Description>
</rdf:RDF>
```