Abstract: Represent 150 Arabic-multilingual lexicons using Lemon - to enable them to be used by NLP applications, and interlinked with the Open Linguistic Data Cloud.

Types of Lexicon we addressed

- **Dictionary**: a list of lexical entries, each with some bi/trilingual translations.
- **Thesaurus**: sets of synonymous lexical entries. Each set is lexicalized in one or more languages.
- **Glossary**: a domain-specific lexicon. Each lexical entry is defined in a few lines. Advanced glossaries provide also synonyms, translation(s), and relations.
- **Linguistic Lexicon**: entries with linguistic features, and senses that might be combined in a description.
- **Semantic-variations lexicon**: pairs of semantically close lexical entries and the differences between their meanings, (e.g. like ~ love, pain ~ ache).

Tentative Representation in Lemon

- **Lexical entry**: a translation term in a dictionary, a synonym in a thesaurus, a term in a glossary, or a headword in a linguistic lexicon.
- **Lexical concept**: a gloss in a glossary, a set of synonyms in a thesaurus, or a translation set in a dictionary.
- **Ontology concepts**: entities in the Arabic Ontology, also linked with lexical concepts using the isConceptOf property.
- **Relations**: semantic relations like related, border/narrower, etc) represented using conceptRel.
- **Linguistic features**: Glosses/definitions are skos:definition. POS, root and inflections are using other Lemon properties.

**Example**

```
<country/> http://ontology.birzeit.edu/country
```

**To correctly represent Arabic entries in Lemon**

The lemma for each lexical entry, in each of the 150 lexicons should be specified, which would enable lexicons to be interlinked based on their lemmas.

**Also**: extend the Lemon morph module to cover Arabic-specific features, e.g., imperfect and imperative verbs, verbal nouns, intensive participle, place nouns, time nouns, instrumental noun.