

ShExStatements: Simplifying Shape Expressions for Wikidata

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- **Motivation**

- describe and validate Wikidata entities
- a light version of ShEx (shape expressions)
based on WikiProjects
- generate shape expressions from simple CSV statements and files.
- Multilingual: support multiple languages

- **ShExStatements**

- simple tabular syntax with 5 columns
- Demonstration: <https://shexstatements.toolforge.org/>

Prefix	URL			
Node	Property	Value	Cardinality	Comment

ShExStatements: TV Series

wd|<http://www.wikidata.org/entity/>|||

wdt|<http://www.wikidata.org/prop/direct/>|||

xsd|<http://www.w3.org/2001/XMLSchema#>|||

@tvseries|wdt:P31|wd:Q5398426|# instance of a tvseries

@tvseries|wdt:P136|@genre|*|# genre

@tvseries|wdt:P495|. |+|#country of origin

@tvseries|wdt:P57|. |+|#director

@tvseries|wdt:P58|. |+|#screenwriter

@genre|wdt:P31|wd:Q201658,wd:Q15961987|#instance of genre

Property

Description

wdt:P17

Country

wdt:P131

located in the administrative territorial entity

wdt:P625

Coordinate location

wdt:P856

Official website

wdt:P1705

Native label

wdt:P6375

Street address

Information related to Hospital on Wikidata (Wikidata:WikiProject Hospitals)

ShEx: How to describe and validate
such information?

ShExStatements: How to describe and validate such information in a simple manner?

Prefix	URL			
Node	Property	Value	Cardinality	Comment

Fig 1: ShExStatements

5 columns of ShExStatements

- **Node name:** @hospital, @language,...
- **Property:** foaf:name, wdt:P17,...
- **Allowed values:** xsd:decimal, wd:Q16917,...
- **Cardinality:** ?,+,*,1,2,...
- **Comments:** #name

Separators in ShExStatements

- ,: comma
- |: vertical bar
- ;: semi-colon

Prefixes and URLs in ShExStatements

- **Prefix:** xsd, wdt,...
- **URL:** <<http://www.wikidata.org/prop/direct/>>,...

ShExStatements: Hospital

```
wd,<http://www.wikidata.org/entity/>,,,  
wdt,<http://www.wikidata.org/prop/direct/>,,,  
xsd,<http://www.w3.org/2001/XMLSchema#>,,,
```

```
@hospital,wdt:P31,wd:Q16917,,# instance of a hospital
```

```
@hospital,wdt:P17,.,1,#country
```

```
@hospital,wdt:P131,.,1,#located in the administrative territorial entity
```

```
@hospital,wdt:P625,.,+,#coordinate location
```

```
@hospital,wdt:P856,.,*,#official website
```

Multilingual

ShExStatements: How to describe and validate information in local languages?

ShExStatements: Hospital (Malayalam)

വികിഡിയാ;[<http://www.wikidata.org/entity/>;;](http://www.wikidata.org/entity/)
പ്രോപ്പർട്ടി;[<http://www.wikidata.org/prop/direct/>;;](http://www.wikidata.org/prop/direct/)
എക്സ്എസ്ഐ;[<http://www.w3.org/2001/XMLSchema#>;;](http://www.w3.org/2001/XMLSchema#)

@ആശുപത്രി;പ്രോപ്പർട്ടി:P31;വികിഡിയാ:Q16917,വികിഡിയാ:Q7257872;# ആശു
@ആശുപത്രി;പ്രോപ്പർട്ടി:P17;. ;1; #രാജ്യം
@ആശുപത്രി;പ്രോപ്പർട്ടി:P131;. ;1 ; #സ്ഥിതിചെയ്യുന്ന ഭരണസ്ഥലം
@ആശുപത്രി;പ്രോപ്പർട്ടി:P625;. ;+;# ഭൗമനിർദ്ദേശാങ്കങ്ങൾ
@ആശുപത്രി;പ്രോപ്പർട്ടി:P856;IRI;*; # ഔദ്യോഗിക വെബ്സൈറ്റ്

Demonstration:

<https://shexstatements.toolforge.org/>

References

1. **ShEx** <https://www.w3.org/community/shex/>
2. **ShExStatements online** <https://shexstatements.toolforge.org/>
3. **ShExStatements** <https://github.com/johnsamuelwrites/ShExStatements>
4. **ShExStatements Python package** <https://pypi.org/project/shexstatements/>

Thank you

Questions?

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