# Typesetting with X<sub>Ǝ</sub>LATEX for Kurdish

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**Abstract**

This document provides technical information to use the XƎLATEX typesetting for the Kurdish language using the `Polyglossia` package. The current configuration of the Kurdish language supports the Sorani and Kurmanji dialects, both of them in two scripts, Latin and Persian-Arabic. Our main objective is to promote the usage of the XƎLATEX typesetting and create educational content to this end. The Kurdish XƎLATEX project is available at https://kurdishxelatex.github.io/.

## 1 Introduction

Kurdish is an Indo-European language widely spoken among the Kurdish population in the Middle East and the Kurdish diaspora around the world. The Kurdish language is considered as a dialect continuum with mainly three dialects, Sorani, Kurmanji and Southern Kurdish, and also has mutual intelligibility with the Zaza–Gorani languages. Among the Kurdish dialects, Sorani and Kurmanji are widely used in education and media. In addition to the dialect diversity, Kurdish uses various scripts and follows different writing norms, such as the use of numerals and punctuation marks, due to its unique administrative situation. Currently, two scripts are widely used for writing Kurdish: Latin and Persian-Arabic, which are both based on phonemic orthographies. Although these two scripts are widely used for writing all the dialects of Kurdish, among the Kurmanji and Sorani speakers, the Latin and the Persian-Arabic scripts are respectively more popular.

## 2 Kurdish in `Polyglossia`

`Polyglossia`[1] is a modern multilingual typesetting in XƎLATEX and LuaLATEX which is currently supporting over 70 languages[2]. Given the diversity in scripts and dialects of Kurdish, `Polyglossia` is an ideal package to support the Kurdish language.

The following shows a basic document structure in XƎLATEXwith `Polyglossia`:

```
1    \documentclass{article}
2    \usepackage{polyglossia}
3    \setmainfont{Times New Roman}
4    \setdefaultlanguage[variant=sorani,script=latin,numerals=western]{kurdish}
5    \title{Nûsrawekeyekî Min}
6    \author{Nawî min}
7    \date{\ontoday}
8    \begin{document}
9    \maketitle
10   \end{document}
```

The configuration of Kurdish in `Polyglossia` includes Sorani and Kurmanji in both scripts with the following options:

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[1] https://github.com/reutenauer/polyglossia
[2] As of May 2020

| Polyglossia name | variant | script | numerals |
|---|---|---|---|
| Kurdish | `sorani` | `arabic`, `latin` | `eastern`, `western` |
| | `kurmanji` | `arabic`, `latin` | `eastern`, `western` |

Table 1: Options to use Kurdish in `Polyglossia`

- **variant**: `kurmanji` or `sorani` (*default*)
- **script**: `arabic` or `latin`
- **numerals**: `western` or `eastern`
- **locale**: currently set by default
- **calendar**: currently set by default to the Gregorian calendar of Kurdish

The scripts for Sorani and Kurmanji are by default `arabic` and `latin`. In addition to the default `\today`, `\ontoday` can be used to take the Izafa structure of Kurdish into account. For instance, the first command produces *15 Gulan 2020* (May 15, 2020) while the latter takes the morphological change into account by producing *15ê Gulanê 2020* (literally meaning, 15 of May of 2020). This option is available for both dialects.

Table 2 and 3 provide the translation of the months and keywords in the current configuration of Kurdish in `Polyglossia`.

| English | Sorani-Arabic | Sorani-Latin | Kurmanji-Arabic | Kurmanji-Latin |
|---|---|---|---|---|
| January | کانوونی دووهەم | Kanûnî Yekem | چلهیا پاشین | Çileya Paşîn |
| February | شوبات | Şubat | شبات | Sibat |
| March | ئازار | Azar | ئادار | Adar |
| April | نیسان | Nîsan | نیسان | Nîsan |
| May | ئایار | Ayar | گۆلان | Gulan |
| June | حوزەیران | Huzeyran | حەزیران | Hezîran |
| July | تەمموز | Temmûz | تیرمەه | Tîrmeh |
| August | ئاب | Ab | تەباخ | Tebax |
| September | ئەیلوول | Eylûl | ئیلۆن | Îlon |
| October | تشرینی یەکەم | Tişrînî Yekem | چریا پێشین | Çiriya Pêşîn |
| November | تشرینی دووهەم | Tişrînî Dûhem | چریا پاشین | Çiriya Paşîn |
| December | کانوونی یەکەم | Kanûnî Dûhem | چلهیا پێشین | Çileya Pêşîn |

Table 2: Name of the months in the Kurdish calendars in `Polyglossia`

## 3   Conclusion

This document is aiming at providing regular update on the progress of the Kurdish TEX community and the Kurdish configuration in `Polyglossia`. For further information regarding `Polyglossia`, please consult [1] or visit the Kurdish X<sub></sub>LATEX Users Group at https://kurdishxelatex.github.io/.

## References

[1] François Charette, Arthur Reutenauer, Bastien Roucariès, and Jürgen Spitzmüller. Polyglossia: Modern multilingual typesetting with XƎLATEX and LuaLATEX. https://ctan.math.illinois.edu/macros/latex/contrib/polyglossia/polyglossia.pdf. (Date accessed: 2020-05-15).

| English | Sorani-Arabic | Sorani-Latin | Kurmanji-Arabic | Kurmanji-Latin |
|---|---|---|---|---|
| preface | پێشەکی | Pêşekî | پێشگۆتن | Peşgotin |
| references | سەرچاوەکان | Serçawekan | ژێدەر | Jêder |
| abstract | پوختە | Puxte | کورتەبیر | Kurtebîr |
| bibliography | کتێبنامە | Kitêbname | چافکانیا پرتووکان | Çavkanîya Pirtukan |
| chapter | بەندی | Bendî | سەرێ | Serê |
| appendix | پاشکۆ | Paşko | پاشکۆ | Tebînîya |
| contents | نێوەرۆک | Nêweřok | نافێرۆک | Navêrok |
| list of figures | لیستی وێنەکان | Lîstî Wênekan | هەژمارا دیمەنا | Hejmara Dimena |
| list of tables | لیستی خشتەکان | Lîstî Xiştekan | هەژمارا کەڤالێن | Hejmara Kevalen |
| index | پێتوێن | Pêřist | پێرست | Endeks |
| figure | وێنەی | Wêney | دیمەنێ | Dimenê |
| table | خشتەی | Xiştey | کەڤالا | Kevala |
| part | بەشی | Beşî | بەشا | Bêşa |
| enclosure | هاوپێچ | Hawpêç | دوماهک | Dumahik |
| correspondance | روونووس | Řûnûs | بەلاڤکەر | Belavker |
| head to | بۆ | Bo | ژ بۆ | Ji bo |
| page | لاپەڕە | Lapeře | رووپەلێ | Rûpelê |
| see | چاو لێکەن | Çaw lêken | بنێرا | binêra |
| also see | هەروەها چاو لێکەن | Herweha çaw lêken | لە ڤیا ژ بنێرا | li vêya jî binêra |
| proof | سەلماندن | Selmandin | دەلیل | Delîl |
| glossary | فەرهەنگۆک | Ferhengok | چافکانیا لێکۆلینێ | Çavkanîya lêkolînê |

Table 3: Translation of the glosses in Kurdish in `Polyglossia`