l2r
r2l

a few tips

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1 Introduction

With ConTEXt you can typeset in two directions: from left to right and from right to left. In fact you can also combine these two directions, like this:

```
There are many {\righttoleft \maincolor \bf scripts in use} and some run into the
other direction. However, there is {\righttoleft \maincolor \bf no fixed relation
{\lefttoright \black \tf between the} direction of the script} and cars being
driven left or right of the road.
```

There are many **esu ni stpircs** and some run into the other direction. However, there is **dexfi on tpircs eht fo noitcerid** between the **noitaler** and cars being driven left or right of the road.

This manual is written by a left to right user so don't expect a manual on semitic typesetting (Hebrew and Arabic). Also don't expect a (yet) complete manual. I'll add whatever comes to mind. So let's see how Arabic comes out:

```
The sentence \quotation {I have no clue what this means.} is translated (by
Google Translate) into \quotation {\ar \righttoleft ليس لدي أي فكرة عما يعنيه هذا.}
which is then translated back to \quotation {I have no idea what this means.} so
maybe arabic has no clue what a clue is. The suggested Arabic pronunciation is
\quotation {\ar lays laday 'ayu fikrat eamaa yaenih hadha}. Hebrew also likes ideas
more: \quotation {\hr \righttoleft אין לי מושג מה זה אומר}.
```

The sentence "I have no clue what this means." is translated (by Google Translate) into "ليس لدي أي فكرة عما يعنيه هذا." which is then translated back to "I have no idea what this means." so maybe arabic has no clue what a clue is. The suggested Arabic pronunciation is "hineay aamae tarkif uya' yadal syal ahdah". Hebrew also likes ideas more: "אין לי מושג מה זה אומר".

The ConTEXt (or any TEX) ecosystem deals with languages and fonts. Languages (that relate to scripts) have specific characteristics, like running from right to left, and fonts provide a repertoire of glyphs and features. There is no real (standard) relationship between these. In for instance browsers, there are automatic fallback systems for missing characters in a font: another font is taken. These fallbacks are often not easy to tweak.

In this document we use Dejavu and although that font has Arabic shapes in its monospace variant, the serifs come without them (at least when I write this down). Before we actually define the bodyfont we hook in some fallbacks. The typescript for Dejavu has lines like this:

```
\definefontsynonym
  [SerifBoldItalic]
  [name:dejavuserifbolditalic]
  [features=default,
   fallbacks=SerifBoldItalic]
```

This permits us to do this:

```
\definefontfallback
  [Serif] [scheherazaderegular*arabic sa 1.5]
  [arabic] [force=yes]
```

```
\definefontfallback
  [SerifBold] [scheherazadebold*arabic sa 1.5]
  [arabic] [force=yes]
\definefontfallback
  [SerifItalic] [scheherazaderegular*arabic sa 1.5]
  [arabic] [force=yes]
\definefontfallback
  [SerifBoldItalic] [scheherazadebold*arabic sa 1.5]
  [arabic] [force=yes]

\definefontfallback
  [Serif] [sileot*hebrew sa 1.0]
  [hebrew] [force=yes]
\definefontfallback
  [SerifBold] [sileot*hebrew sa 1.0]
  [hebrew] [force=yes]
\definefontfallback
  [SerifItalic] [sileot*hebrew sa 1.0]
  [hebrew] [force=yes]
\definefontfallback
  [SerifBoldItalic] [sileot*hebrew sa 1.0]
  [hebrew] [force=yes]

\definefontfeature[fakemono][mode=node,fakemono=yes]

% \definefontfallback
%   [Mono] [scheherazaderegular*fakemono sa 1.5]
%   [arabic] [force=yes,factor=1] % factor forces a monospace

\definefontfallback
  [Mono] [sileot*fakemono sa 1.0]
  [hebrew] [force=yes,factor=1] % factor forces a monospace

\setupbodyfont
  [dejavu,10pt]
```

In addition we set up the languages:

```
\setuplanguage[ar][font=arabic,bidi=right]
\setuplanguage[he][font=hebrew,bidi=right]
```

The following example demonstrates what the effects of these commands are:

```
{ليس لدي أي فكرة عما يعنيه هذا.}
{אין לי מושג מה זה אומר.}
{\righttoleft ليس لدي أي فكرة عما يعنيه هذا.}
{\righttoleft אין לי מושג מה זה אומר.}
{\ar \righttoleft ليس لدي أي فكرة عما يعنيه هذا.}
{\he \righttoleft אין לי מושג מה זה אומר.}
```

```
{\ar ليس لدي أي فكرة عما يعنيه هذا.}
{\he רמוא הז המ נשומ יל ןיא.}
```

ليس لدي أي فكرة عما يعنيه هذا.
רמוא הז המ נשומ יל ןיא.

ليس لدي أي فكرة عما يعنيه هذا.
אין לי מושג מה זה אומר.

ليس لدي أي فكرة عما يعنيه هذا.
אין לי מושג מה זה אומר.

In principle you can also rely on automatic direction changes, for instance by using the following command:

```
\setupdirections
  [bidi=global,
   method=three]
```

But that doesn't do a font switch for you, nor does it do any of the other language related settings. It really helps if you properly tag your document content, as in:

```
{\ar ليس لدي أي فكرة عما يعنيه هذا.}
{\he רמוא הז המ נשומ יל ןיא.}
```

One reason to set the `font` parameter for a language is that it will activate the right features in a font. Instead of falling back on some default, we can be very specific in what we want to enable.