

Mirrored ASCII

L2/08-414

Document at: http://docs.google.com/Doc?id=dfqr8rd5_353ft4xw6hj

For testing BIDI UI enablement, it turns out to be very useful to use mechanisms that give non-Arabic/Hebrew users an accurate picture of how a "reversed" UI would look. For this, it is useful to have Unicode letters that are the visual reversals of ASCII letters. With a pixel mirroring, the page would then come out looking (roughly) like English, with UI elements in the right places, and everything readable.

My first attempt is in the attached graphic, first before graphic mirroring, then after. Look at the white box on the left bottom of the "After" image.

Before Pixel Mirroring:

Input	Output 1
the quick brown fox jumped over the lazy dog.	ᄁᄇᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁ
THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG.	ᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁ

After Pixel Mirroring:

Output 1	Input
ᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁ	ᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁ
THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG.	ᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁ ᄁᄁᄁᄁᄁ ᄁᄁᄁ

A bit crude so far (some letters definitely could use improvement!), but actually readable. The challenge is to pick the best characters in the fonts available on most people's browsers (although people can be requested to download fonts like Code2000). Because we want the characters to work right as far as linewrap, etc., if possible they should have pretty much the same properties as the respective ASCII letters.

The table of mappings that I used above is at: <http://spreadsheets.google.com/pub?key=pA-jnsSQQRcY3IFcweX3G0g>
I would appreciate any feedback on better choices that I can incorporate into that table. Some of the above above could definitely stand improvement: especially the capitals K, P, L, and G, and lowercase t, k, g, and h. I also need to add digits and common punctuation.

Checking

If you want to try it out on some text:

1. Go to <http://demo.icu-project.org/icu-bin/translit>
2. Into the Compound 1 box, type: **mirror**
3. Into the Input box, put some text.
4. Hit the Transform button

I used for #3:

the quick brown fox jumped over the lazy dog.

THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG.