1 Introduction to Keyman Multiplatform Keyboards

If you have some experience designing typing keyboards for computers, the interface for designing touch keyboards looks deceptively similar. But the additional steps needed to make a touch layout work are not obvious. This tutorial walks you through the process of creating your first touch keyboard as part of a complete keyboard solution in Keyman Developer.

You will need to have Keyman Desktop and Keyman Developer installed on a Windows computer. Additionally, you may want one or more other devices on which you can test your keyboard.

For this exercise, we will use the Fulfulde language cluster spoken across many Sahelian countries of Africa. Fulfulde is usually written using the Latin alphabet, but there are a few additional characters that must be added. They are as follows, together with their Unicode values.

ɓ	**U+0253**	**Ɓ**	**U+0181**
ɗ	**U+0257**	**Ɗ**	**U+018A**
ŋ	**U+014B**	**Ŋ**	**U+014A**
ɲ	**U+0272**	**Ɲ**	**U+019D**
ƴ	**U+01B4**	**Ƴ**	**U+01B3**

Important differences about touch keyboards

In this tutorial, we distinguish between **touch** keyboards, which are pressed by fingers on a screen, and **typing** keyboards which involve tapping real keyboard keys.

Touch keyboard layouts must be treated differently than typing keyboards because they are primarily visual keyboards. Typing keyboards are usually learned by the feel of the keys and the use of muscle memory (where a repeated action becomes automatic), which is why sequences of keys are often used to produce a single character. In addition, for many typing keyboards, the user is expected to memorize a series of keystrokes to produce a desired character. For example, when laying out a typing keyboard you might use the following sequence to produce the letter ɓ:

; + b = ɓ

(that is, typing ";" followed by "b" produces "ɓ"). Users must have a typing guide of some sort to remind them, but this combination is quickly learned. The combination might use a deadkey, where the semicolon (the deadkey) produces no visual output on the screen, but typing "b" produces "ɓ". Or the keyboard might display the semicolon when it is typed, then replace it with "ɓ" when "b" is pressed. Typists will master this quickly and throw away the guide. Experienced typists won't need to look at the hardware keys when they type.

On a touch keyboard, however, there is an understanding that WYTIWYG (What you touch is what you get). That means that the letter ɓ ought to be visible somewhere on the keyboard. We'll look at the options that we have for touch keyboards later in this document.

Plan beyond the touchscreen

You may think that you only want to create a touch keyboard layout and don't want to bother with setting up a typing keyboard layout. However, the distinction between a computer and a mobile device is becoming less and less all the time. Often a tablet will be paired with a bluetooth keyboard to enable the user to type faster. The minute this happens, your keyboard will not work as expected. Long press features don't work on the attached keyboard. That is why when you create a keyboard package in Keyman Developer it is always assumed that you will be producing both and bundling them together.

For ideas or methods for accessing "special" characters on touch or physical keyboards, see Keyboard Ideas and Samples .