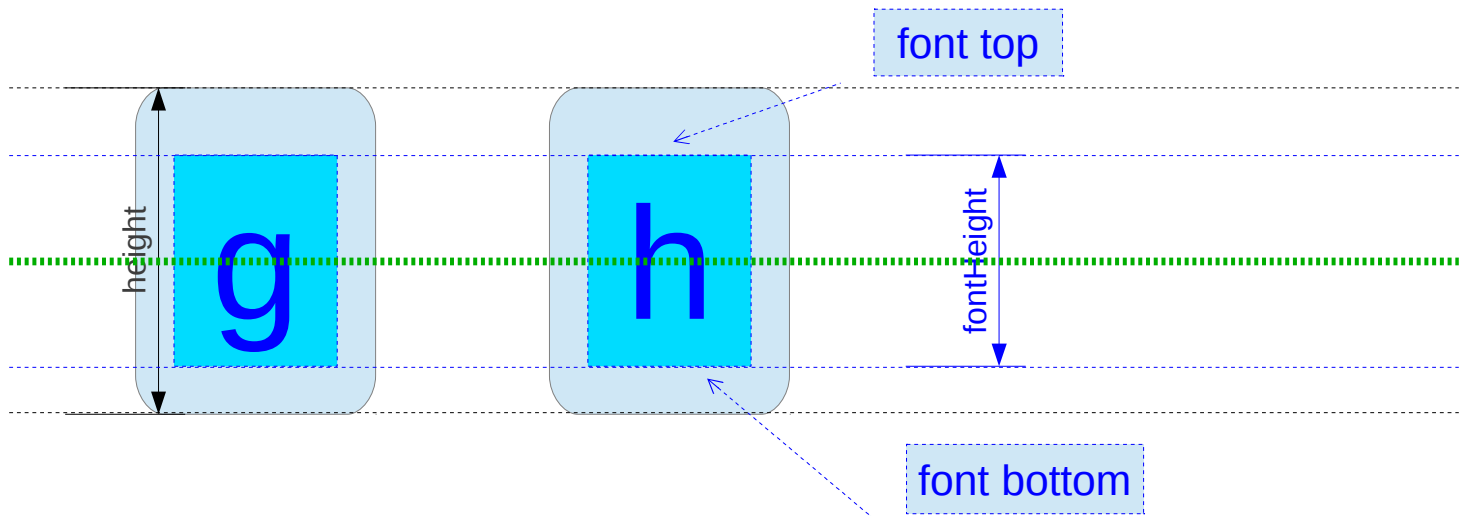


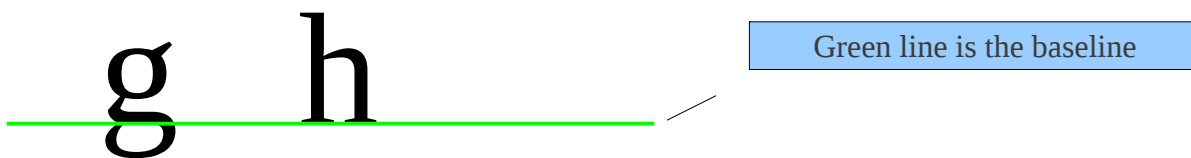
Why old solution does not work:

We use the height of the font to calculate the center of the text. All the characters in a font share the same font height. The following figure showing why the “g” is not in the center (green line) of the popup.



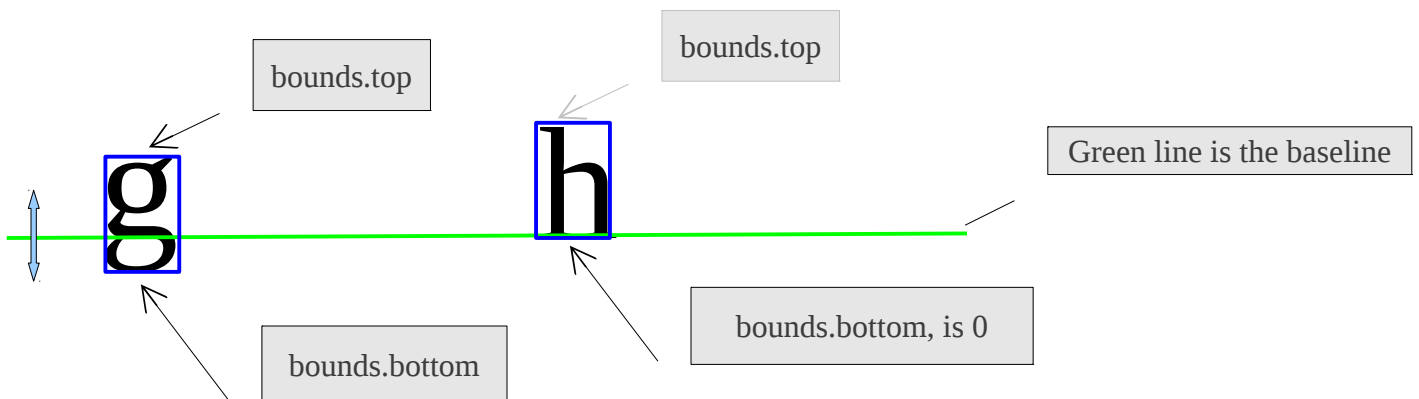
How `drawText()` and `getTextBounds()` work:

If `y` is 100, the “g” and “h” will be drawn by `drawText()` method as the following figure:



`getTextBounds()` method can return the smallest rectangle that encloses all of the character.

The left, top, right and bottom values of the rectangle are **the offsets to the baseline**.



New solution:

$$y = \text{height} / 2 + (0 - \text{bounds.top}) / 2$$

height: the height of the PopupWindow.