

Software Testing Mentor Job Aid


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Basic complex script input testing – Arabic

Unlike East Asian input complex script languages do not require an additional utility program or Input Method Editor (IME) for input. However, complex script languages (Hindi, Arabic, Hebrew, and Vietnamese) are based on glyph manipulation. A glyph is the physical appearance of a character, and with complex scripted languages the physical appearance of a character can change depending on what characters proceed or succeed that character. Thus complex script input is dependent on key sequencing (the correct order of key inputs) to generate a valid input string. Typically most developers consider one keystroke to represent one character; however, with key sequencing and complex scripted characters it may sometimes require multiple key presses to represent a single character.

Complex script is not synonymous with bi-directionality or mirroring. Additionally, not all complex script languages (Hindi and Vietnamese for example) are bi-directional. Also note that not all text boxes (e.g. Start -> Run) support bi-directional text layout, but all edit controls should correctly handle and process strings containing complex scripted characters.

Arabic input test for proper key sequencing (and bi-directionality)

Step	Action	Expected Result
1	Ensure the system is configured for complex script language support and the Arabic keyboard layout is installed. Note See Installing supplemental language support and international keyboard layouts job aid. Note Select the Arabic (101) keyboard layout in the Keyboard layout/IME dropdown list control when adding the Arabic keyboard layout.	
2	Set focus to the edit control in the application under test. Note The application (or edit control) under test must have focus when changing the keyboard layout.	
3	Select the Arabic (AR) keyboard layout in the Language bar	
4	Type [hx Hfh hpl]>.	

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Arabic input test for proper glyph manipulation

Step	Action	Expected Result
5	Repeat steps 1 through 3 above.	
6	Press b Note This is the lam-alif ligature.	لا
7	Press the Backspace key Note Complex scripts do not behave similar to western scripts when deleting characters, adding characters, or otherwise modifying a ligature.	ل

Arabic input test for proper glyph manipulation

Step	Action	Expected Result
8	Repeat steps 1 through 3 above.	
9	Type]Qv~QsQ	دَرسَ
10	Press the left arrow key 4 times	
11	Press the Delete key Note The diacritic above the middle character is deleted and the remaining part of the glypy descends to a position relative to the height of the other characters in the string.	دَرسَ

Arabic input test for proper glyph manipulation

Step	Action	Expected Result
12	Repeat steps 1 through 3 above.	
13	Type hgi	اله
14	Press the left arrow key once	
15	Press h Note The last two characters separate and a new character is inserted in the string.	الاه

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