

# Bash string manipulation cheatsheet

Assignment	
Assign value to variable if variable is not already set, value is returned.	<code>\${variable="value"}</code>
Combine with a <code>:</code> no-op to discard/ignore return value .	<code>: \${variable="value"}</code>
Removal	
Delete shortest match of needle from front of haystack	<code>\${haystack#needle}</code>
Delete longest match of needle from front of haystack	<code>\${haystack##needle}</code>
Delete shortest match of needle from back of haystack	<code>\${haystack%needle}</code>
Delete longest match of needle from back of haystack	<code>\${haystack%%needle}</code>
Replacement	
Replace first match of needle with replacement from haystack	<code>\${haystack/needle/replacement}</code>
Replace all matches of needle with replacement from haystack	<code>\${haystack//needle/replacement}</code>
If needle matches front of haystack replace with replacement	<code>\${haystack/#needle/replacement}</code>
If needle matches back of haystack replace with replacement	<code>\${haystack/%needle/replacement}</code>
Substitution	
If variable not set, return value , else variable	<code>\${variable-value}</code>
If variable not set or empty, return value , else variable	<code>\${variable:-value}</code>
If variable set, return value , else null string	<code>\${variable+value}</code>
If variable set and not empty, return value , else null string	<code>\${variable:+value}</code>
Extraction	
Extract length characters from variable starting at position	<code>\${variable:position:length}</code>
String length of variable	<code>\${#variable}</code>
Escaping	
Single quotes inside a single quoted string	<code>echo 'Don'\''t break my escape!'</code>

## Reference

- <http://tldp.org/LDP/abs/html/string-manipulation.html>
- <http://tldp.org/LDP/abs/html/parameter-substitution.html>
- Special characters:
  - `*` : <https://www.tldp.org/LDP/abs/html/special-chars.html#ASTERISKREF>
  - `?` : <https://www.tldp.org/LDP/abs/html/special-chars.html#WILDCARDQU>
- [http://pubs.opengroup.org/onlinepubs/9699919799/utilities/V3\\_chap02.html#tag\\_18\\_06\\_02](http://pubs.opengroup.org/onlinepubs/9699919799/utilities/V3_chap02.html#tag_18_06_02)