Work with Strings

Practice working with strings in Python. Find the value of A.

**Part I: String operations**

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| Python Expression | Value of A |
| A = 3 \* 12 | A =36 |
| A = 3 \* “12” | A = ‘121212’ |
| A = 3 \* str(“12”) | A = ‘121212’ |
| A = “a” + “bc”\*2 | A = ‘abcbc’ |
| A = (“B” + “CD”) \* 2 | A = ‘BCDBCD’ |
| A = “a” in “hard” | A = True |
| A = “ah” in “hard” | A = False |
| ss = “Computer Science”  A = ss[:4]  B = ss[-2:]  C = ss[-6:-2] | A = ‘Comp’  B = ‘ce’  C = ‘cien’ |

**Part II: String functions**

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| Python Expression | Value of A |
| ss1 = “Python”  ss2 = “Program2024” |  |
| A = ss1.isupper() | A = False |
| A = ss1.isalpha() | A = True |
| A = ss2.isdigit() | A = False |
| A = ss2.isalnum() | A = True |
| A = ss2.upper() | A = 'PROGRAM2024' |
| A = ss2.count(“r”) | A = 2 |
| A = ss2.find(“r”)  B = ss2.rfind(“r”) | A =1  B =4 |
| A = ss2.replace(“r”, “e”)  B = ss2.replace(“am”, “ams”) | A = ‘peogem2024’  B = ‘programs2024’ |

**Part III: string format**

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| Python Expression | Value of A |
| message = ‘Values {} and {}.’  A = message.format(25, -37)  B = message.format(1.25, ‘Zero’) | A = ‘Values25and-37’  B = ‘Values1.25andZero’ |
| pattern = "|{:5d}| |{:4d}|"  A = pattern.format(175, -93) | A = '|  175| | -93|' |
| pattern = "|{:>+5d}| |{:<-4d}|"  A = pattern.format(175, -93)  B = pattern.format(-87, 26) | A = '| +175| |-93 |'  B ='|  -87| |26  |' |
| pi = 3.141592653589793  A = "{:8.4f}".format(pi) | A = '  3.1416' |
| min\_flt = 2.2250738585072014e-308  max\_flt = 1.7976931348623157e+308  A = "{:.4e}".format(min\_flt)  B = "{:.4f}".format(min\_flt)  C = "{:.4e}".format(max\_flt)  D = "{:.4f}".format(max\_flt) | A ='2.2251e-308'  B ='0.0000'  C = '1.7977e+308'  D = '179769313486231570814527423731704356798070567525844996598917476803157260780028538760589558632766878171540458953514382464234321326889464182768467546703537516986049910576551282076245490090389328944075868508455133942304583236903222948165808559332123348274797826204144723168738177180919299881250404026184124858368.0000' |