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3  # Date: 7-6-2015  
4  # Description: GIS 671, Python Assignment 1, demonstrates Python programming  
5  #-----  
6  
7  # Task 1: Import random & math modules into the script.  
8  import random, math  
9  
10 # Task 2: Create variable citystate, assign value, and print.  
11 citystate = 'Minneapolis, MN'  
12 print citystate  
13  
14 # Task 3: Print the length of citystate.  
15 print len(citystate)  
16  
17 # Task 4: Print the citystate variable in upper case.  
18 print citystate.upper()  
19  
20 # Task 5: Add variable hourlyWage & assign value. Calculate a rounded version of  
21 #         the hourlyWage variable. Print hourlyWage & rounded version.  
22 hourlyWage = 65.57  
23 roundedWage = math.ceil(hourlyWage)  
24 print "Hourly Rate: " + str(hourlyWage) + " Rounded Rate: " + str(roundedWage)  
25  
26 # Task 6: Add variables FileName & JustName. Print JustName.  
27 FileName = "BearSightings.shp"  
28 JustName = FileName[:-4]  
29 print JustName  
30  
31 # Task 7: Create 2 variables to perform math functions of multiplication,  
32 #         and square root. Add another variable to hold division outcome & print  
33 number1 = 25.0  
34 number2 = 2.0  
35 number3 = (number1 + number2) / 2  
36 print number1 * number2  
37 print math.sqrt(number1 * number2)  
38 print number3  
39  
40 # Task 8: Create variable to prompt for user age & store. Add if statement  
41 #         to output based on age input.  
42 age = int(raw_input("What is your age?"))  
43 if (age > 17 and age < 35):  
44     print "Old enough to vote!"  
45 elif age > 34:  
46     print "Old enough to vote and run for President!"  
47 else:  
48     print "Too young to vote!"  
49  
50 # Task 9: Print citystate. Use if statement to find "MN". Replace MN with  
51 #         Minnesota if MN is found. Print modified citystate.  
52 check = citystate.find("MN")  
53 if check == -1:  
54     print "MN not found!"  
55 else:  
56     citystate = citystate.replace('MN', 'Minnesota')  
57     print citystate  
58  
59 # Task 10: Create a list with 3 string items. Print each item using a loop  
60 #          so each prints on one line.  
61 countdown = ["Three", "Two", "One"]  
62 a = 0  
63 for a in countdown:  
64     print a  
65
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66 # Task 11: Use for loop to output a range function incrementing by 10
67 #           from 100 to 150.
68 for i in range(100, 160, 10):
69     print i
70
71 # Task 12: Generate random integer between 1 & 10 then print.
72 #           Keep adding 1 to the random # generated until it reaches 12.
73 x = random.randint(1, 10)
74 print x
75 while x < 12:
76     x += 1
77     print x
78
79
```