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COSC 1336 sec 006

HW chpt 4

Algorithm Workbench 1, 3, 5, 6, 7

1. Write an if statement that assigns 20 to the variable y and assigns 40 to the variable z if the variable x is greater than 100.

if x > 100:

y = 20

z = 40

3. Write an if-else statement that assigns 0 to the variable b if the variable a is less than 10. Otherwise it should assign 99 to the variable b.

if a < 10:

b = 0

else:

b = 99

5. Write nested decision structures that perform the following: If amount1 is greater than 10 and amount2 is less than 100, display the greater of amount1 and amount2.

amount1 = input(‘Enter an amount for 1: ‘)

amount2 = input(‘Enter an amount for 2: ‘)

if amount1 > 10 and amount2 < 100:

if amount1 > amount2:

print amount1

else:

print amount2

else:

print(‘You have entered an invalid number.’)

6. Write an if-else statement that displays ‘Speed is normal’ if the speed variable is within the range of 24 to 56. If the speed variable’s value is outside this range, display ‘Speed is abnormal’.

speed = input(‘Enter the speed: ‘)

if speed is >= 24 and <= 56:

print(‘Speed is normal.’)

else:

print(‘Speed is abnormal.’)

7. Write an if-else statement that determines whether the points variable is outside the range of 9 to 51. If the variable’s value is outside this range it should display “Invalid points.” Otherwise, it should display “Valid points.”

number = input(‘Enter your number: ‘)

if number is < 9 or > 51:

print(‘Invalid points.’)

else:

print(‘Valid points.’)