**MET CS 521**

**Information structures with python**

**Lab 2**

Supply the code listed below as a .py file with the missing code filled in.

The output should be as follows:

[11, 12, 13, 14, 15, 16, 17]

[21, 22, 23, 24, 25, 26, 27]

[31, 32, 33, 34, 35, 36, 37]

[41, 42, 43, 44, 45, 46, 47]

[51, 52, 53, 54, 55, 56, 57]

[61, 62, 63, 64, 65, 66, 67]

[71, 72, 73, 74, 75, 76, 77]

pointwise\_product(matrix\_, matrix\_):

[121, 144, 169, 196, 225, 256, 289]

[441, 484, 529, 576, 625, 676, 729]

[961, 1024, 1089, 1156, 1225, 1296, 1369]

[1681, 1764, 1849, 1936, 2025, 2116, 2209]

[2601, 2704, 2809, 2916, 3025, 3136, 3249]

[3721, 3844, 3969, 4096, 4225, 4356, 4489]

[5041, 5184, 5329, 5476, 5625, 5776, 5929]

display\_matrix(pointwise\_product(matrix\_1, matrix\_2)):

[1331, 1464, 1599, 1736, 1875, 2016, 2159]

[4641, 4884, 5129, 5376, 5625, 5876, 6129]

[9951, 10304, 10659, 11016, 11375, 11736, 12099]

[17261, 17724, 18189, 18656, 19125, 19596, 20069]

[26571, 27144, 27719, 28296, 28875, 29456, 30039]

[37881, 38564, 39249, 39936, 40625, 41316, 42009]

[51191, 51984, 52779, 53576, 54375, 55176, 55979]

Process finished with exit code 0

**The code:  
Note:**

**The code is filled is heighted by yellow highlighter**

**Attached the .py file**

**from** constants **import** NUMBER\_OF\_FRAGMENTS  
  
  
**def** display\_matrix(a\_matrix):  
 **for** i **in** range(0, NUMBER\_OF\_FRAGMENTS):  
 **print**(str(a\_matrix[i]))  
  
  
matrix\_ = [[11, 12, 13, 14, 15, 16, 17], [21, 22, 23, 24, 25, 26, 27], [31, 32, 33, 34, 35, 36, 37],  
 [41, 42, 43, 44, 45, 46, 47], [51, 52, 53, 54, 55, 56, 57], [61, 62, 63, 64, 65, 66, 67],  
 [71, 72, 73, 74, 75, 76, 77]]  
  
display\_matrix(matrix\_)  
  
 *# Precondition: a\_matrix is NUMBER\_OF\_FRAGMENTS square and numerical  
 # Postcondition: a\_matrix is on the console in readable form*  
**print**(**'\n'**)  
  
**def** pointwise\_product(a\_matrix,a\_second\_matrix):  
 m = [[0 **for** \_ **in** range(7)] **for** \_ **in** range(7)]  
 **for** i **in** range(0, NUMBER\_OF\_FRAGMENTS):  
 **for** j **in** range(0, NUMBER\_OF\_FRAGMENTS):  
 m[i][j] = (a\_matrix[i][j] \* a\_second\_matrix[i][j])  
 **return** m  
 *# Returns: a NUMBER\_OF\_FRAGMENTS square matrix m with  
 # m[i][j] = a\_matrix[i][j] x a\_second\_matrix[i][j]*  
  
  
  
**print**(**'\npointwise\_product(matrix\_, matrix\_):'**)  
display\_matrix(pointwise\_product(matrix\_, matrix\_))  
  
matrix\_1 = [[11,12,13,14,15,16,17],[21,22,23,24,25,26,27],[31,32,33,34,35,36,37],  
 [41,42,43,44,45,46,47],[51,52,53,54,55,56,57],[61,62,63,64,65,66,67],  
 [71,72,73,74,75,76,77]]  
matrix\_2 = [[121,122,123,124,125,126,127],[221,222,223,224,225,226,227],  
 [321,322,323,324,325,326,327], [421,422,423,424,425,426,427],  
 [521,522,523,524,525,526,527],[621,622,623,624,625,626,627],  
 [721,722,723,724,725,726,727]]  
**print**(**'\ndisplay\_matrix(pointwise\_product(matrix\_1, matrix\_2)):'**)  
display\_matrix(pointwise\_product(matrix\_1, matrix\_2))

**output displayed**

