## SD21063 TEAN JIN HE Data Wrangling Lab Report 1

April 21, 2023

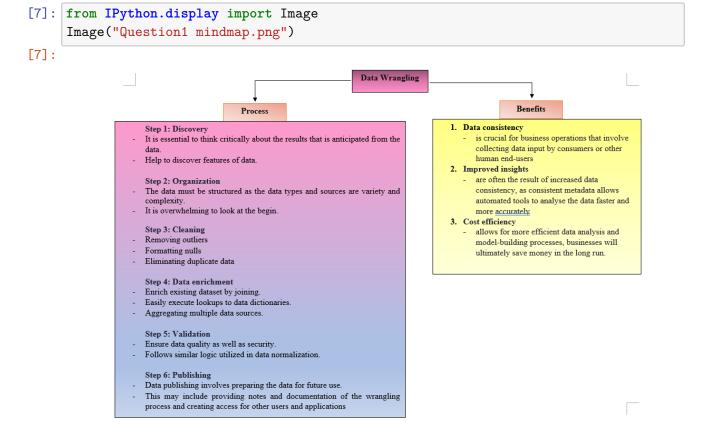
## 1 DATA WRANGLING LAB REPORT 1

1.0.1 Name:Tean Jin He

1.0.2 Matric ID: SD21063

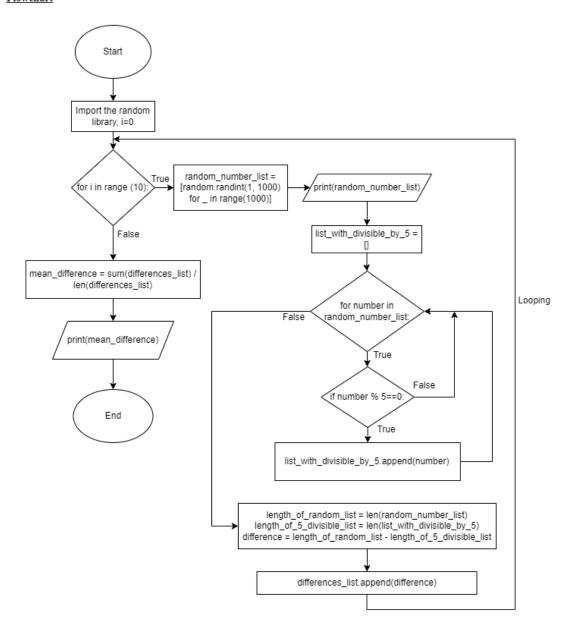
1.0.3 Section: 02G

Question 1



Question 2

- [6]: from IPython.display import Image
  Image("Question2 flowchart.png")
- [6]: Flowchart



[4]: ##Coding of Question 2
# 1. Import the random library.
import random

# 2. Use the randint method from the random library to create 1000 random
→numbers.

```
##random number list = [random.randint(1, 1000)] for in range(1000)]
# 3. Print random number list.
##print(random_number_list)
# 4. Create a list_with_divisible_by_5 list from random_number_list, which will_
⇔contain only numbers
# that are divisible by 5.
##list_with_divisible_by_5 = []
##for number in random_number_list:
    ##if number % 5 == 0:
        ##list_with_divisible_by_5.append(number)
# 5. Use the len function to measure the length of the first list and the
⇔second list, and store them in
# two different variables, length_of_random_list and length_of_5_divisible_list.
→ Calculate the
# difference in length in a variable called difference.
##length_of_random_list = len(random_number_list)
##length_of_5_divisible_list = len(list_with_divisible_by_5)
##difference = length_of_random_list - length_of_5_divisible_list
# 6. Combine the tasks we have performed so far and add a for loop to it. Run,
→the loop 10 times
# and add the values of the difference variables to a list.
differences = []
for i in range(10):
    # Repeat steps 2 to 5
   random_number_list = [random.randint(1, 1000) for _ in range(1000)]
   print(random_number_list)
   list_with_divisible_by_5 = []
   for number in random_number_list:
        if number % 5 == 0:
            list_with_divisible_by_5.append(number)
   length of random list = len(random number list)
   length_of_5_divisible_list = len(list_with_divisible_by_5)
   difference = length_of_random_list - length_of_5_divisible_list
    # Add the difference to the list
   differences.append(difference)
# 7. Then, calculate the arithmetic mean (common average) for the differences
→ in the lengths that you have.
mean_difference = sum(differences) / len(differences)
print(mean_difference)
```

[170, 919, 28, 19, 246, 446, 405, 529, 26, 228, 68, 804, 384, 24, 69, 486, 960, 442, 38, 213, 139, 927, 983, 199, 266, 782, 776, 849, 849, 734, 643, 633, 968, 928, 529, 884, 93, 236, 804, 728, 232, 711, 330, 247, 762, 615, 475, 958, 50, 930, 292, 448, 810, 963, 646, 993, 533, 867, 374, 876, 763, 785, 645, 211, 769, 847, 577, 280, 732, 975, 474, 781, 615, 101, 126, 487, 615, 495, 733, 973, 204, 153, 325, 570, 888, 885, 955, 228, 405, 153, 260, 239, 361, 208, 178, 852, 255, 677, 92, 396, 60, 669, 268, 80, 539, 10, 964, 511, 810, 430, 945, 547, 398, 830, 524, 443, 702, 227, 852, 47, 50, 846, 96, 725, 635, 857, 800, 680, 286, 387, 393, 299, 566, 97, 655, 341, 665, 249, 408, 890, 756, 422, 133, 618, 2, 874, 150, 340, 631, 808, 904, 653, 457, 865, 274, 621, 29, 54, 64, 79, 552, 701, 159, 711, 846, 838, 235, 688, 913, 908, 680, 819, 812, 114, 820, 709, 962, 93, 100, 752, 902, 336, 65, 852, 239, 376, 649, 717, 712, 660, 176, 729, 644, 546, 689, 67, 871, 37, 285, 872, 374, 268, 532, 687, 67, 404, 102, 561, 456, 239, 643, 574, 157, 493, 973, 887, 288, 949, 317, 268, 461, 35, 15, 191, 141, 691, 334, 654, 251, 581, 216, 899, 293, 484, 113, 894, 862, 214, 595, 468, 557, 428, 632, 805, 498, 790, 741, 682, 626, 453, 673, 480, 977, 33, 487, 858, 795, 554, 260, 861, 508, 841, 384, 349, 712, 157, 7, 725, 459, 285, 197, 651, 393, 619, 715, 236, 448, 191, 274, 45, 642, 978, 282, 423, 884, 626, 962, 207, 47, 883, 781, 412, 214, 760, 943, 159, 356, 601, 566, 444, 305, 423, 503, 38, 860, 190, 3, 410, 238, 995, 741, 335, 821, 742, 76, 897, 292, 634, 377, 139, 186, 601, 978 118, 991, 420, 140, 18, 117, 495, 263, 813, 13, 904, 99, 38, 896, 459, 910, 142, 22, 874, 71, 442, 367, 339, 722, 689, 351, 227, 386, 628, 415, 715, 765, 31, 955, 624, 273, 342, 561, 409, 459, 140, 397, 775, 292, 321, 288, 212, 757, 763, 777, 103, 921, 205, 825, 279, 438, 826, 626, 851, 623, 932, 138, 750, 649, 245, 157, 75, 878, 484, 575, 832, 401, 313, 721, 226, 508, 228, 812, 490, 133, 516, 379, 249, 397, 647, 235, 379, 379, 716, 56, 107, 413, 142, 995, 200, 165, 1, 24, 382, 39, 343, 505, 228, 951, 120, 758, 730, 886, 766, 981, 12, 247, 501, 945, 51, 438, 373, 622, 454, 115, 72, 627, 993, 757, 542, 948, 126, 62, 136, 784, 888, 317, 277, 706, 227, 902, 714, 36, 509, 832, 964, 181, 447, 542, 651, 530, 73, 43, 784, 747, 298, 571, 677, 871, 152, 217, 900, 52, 98, 985, 409, 615, 183, 992, 849, 425, 755, 609, 144, 833, 231, 890, 855, 122, 147, 589, 113, 950, 890, 802, 574, 193, 412, 489, 549, 928, 507, 630, 582, 543, 161, 737, 815, 571, 793, 562, 40, 781, 342, 917, 964, 774, 465, 208, 656, 69, 933, 67, 69, 339, 950, 132, 789, 438, 2, 762, 205, 776, 220, 963, 38, 256, 218, 436, 120, 922, 836, 219, 958, 470, 791, 440, 426, 657, 122, 29, 997, 783, 570, 744, 182, 600, 693, 929, 843, 531, 697, 240, 255, 748, 932, 374, 144, 703, 730, 123, 33, 181, 55, 94, 608, 289, 947, 111, 430, 645, 319, 583, 462, 147, 630, 1, 339, 841, 50, 894, 17, 745, 308, 924, 412, 499, 311, 159, 279, 246, 265, 910, 54, 35, 64, 884, 683, 276, 777, 433, 12, 520, 845, 843, 485, 683, 786, 905, 75, 252, 802, 606, 596, 335, 878, 18, 421, 174, 196, 479, 143, 741, 675, 908, 932, 63, 757, 577, 52, 874, 456, 924, 448, 954, 550, 269, 876, 125, 926, 496, 331, 304, 671, 982, 578, 198, 663, 685, 827, 664, 858, 124, 889, 103, 794, 162, 120, 884, 336, 791, 152, 690, 441, 378, 947, 646, 367, 212, 122, 908, 338, 164, 221, 150, 692, 507, 378, 125, 569, 13, 563, 261, 561, 3, 431, 235, 527, 418, 283, 504, 98, 910, 17, 931, 287, 114, 15, 399, 885, 420, 964, 425, 857, 575, 481, 615, 921, 265, 256, 576, 903, 424, 611, 598, 815, 930, 672, 32, 971, 470, 382, 230, 498, 908, 203, 933, 695, 441, 684, 337, 854, 384, 8, 584, 691, 217, 38, 881, 456, 44, 503, 308, 680, 105, 363, 740, 850, 523, 510, 340, 743, 605, 608, 821, 840, 160, 936, 991, 884,

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