ASSIGNMENT-1

SmartBridge Externship (Applied Data Science)

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```
Name = "V.Chandu Reddy"
Age = "20"
print(Name)
print(Age)
```

```
V.Chandu Reddy
20
```

```
x = "Datascience is used to extract meaningful insights."
print(x.split())
```

```
['Datascience', 'is', 'used', 'to', 'extract', 'meaningful', 'insights.']
```

```
def multiplication(num1, num2):
 product = num1 * num2
 return product
result = multiplication(29,4)
print(result)
```

```
116
```

```
Dictionary = {'Odisa' : 'Bhubaneswar', 'Andhra Pradesh' : 'Amaravati', 'Maharastra' : 'Mumbai',
 'West Bengal' : 'Kolkata', 'Goa' : 'Panaji'}
print(Dictionary)
print(Dictionary.keys())
print(Dictionary.values())
```

```
{'Odisa': 'Bhubaneswar', 'Andhra Pradesh': 'Amaravati', 'Maharastra': 'Mumbai', 'West Bengal': 'Kolkata', 'Goa': 'Panaji'}
dict_keys(['Odisa', 'Andhra Pradesh', 'Maharastra', 'West Bengal', 'Goa'])
dict_values(['Bhubaneswar', 'Amaravati', 'Mumbai', 'Kolkata', 'Panaji'])
```

```
def createList(n1, n2):
 return list(range(n1, n2+1))
n1, n2 = 1, 1000
print(createList(1, 1000))
```

```
[1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 4
1, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 7
9, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113,
114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 14
4, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174,
175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 20
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236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 26
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297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 32
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358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 38
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480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 51
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541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 57
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602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 63
2, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662,
663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 69
3, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723,
724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 75
4, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784,
785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 81
5, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845,
846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 87
6, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906,
907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 93
7, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967,
968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 99
8, 999, 1000]
```

```python
#6

import numpy as np
dim = 4
identity_matrix = np.identity(dim, dtype="int")
print(identity_matrix)
```

```
[[1 0 0 0]
 [0 1 0 0]
 [0 0 1 0]
 [0 0 0 1]]
```

```python
#7

import numpy as np
x = np.arange(1,10).reshape(3,3)
print(x)
```

```
[[1 2 3]
 [4 5 6]
 [7 8 9]]
```

```python
#8

import numpy as np
arr1 = [1, 2, 3, 4]
arr2 = [5, 6, 7, 8]

sum = np.add(arr1, arr2)
print(sum)
```

```
[ 6  8 10 12]
```

```python
#9

from datetime import datetime
import pandas as pd

start_date = datetime.strptime("2023-02-01", "%Y-%m-%d")
end_date = datetime.strptime("2023-03-01", "%Y-%m-%d")

D = 'D'

date_list = pd.date_range(start_date, end_date, freq=D)
print(f"Creating list of dates starting from {start_date} to {end_date}")
print(date_list)
```

```
Creating list of dates starting from 2023-02-01 00:00:00 to 2023-03-01 00:00:00
DatetimeIndex(['2023-02-01', '2023-02-02', '2023-02-03', '2023-02-04',
               '2023-02-05', '2023-02-06', '2023-02-07', '2023-02-08',
               '2023-02-09', '2023-02-10', '2023-02-11', '2023-02-12',
               '2023-02-13', '2023-02-14', '2023-02-15', '2023-02-16',
               '2023-02-17', '2023-02-18', '2023-02-19', '2023-02-20',
               '2023-02-21', '2023-02-22', '2023-02-23', '2023-02-24',
               '2023-02-25', '2023-02-26', '2023-02-27', '2023-02-28',
               '2023-03-01'],
              dtype='datetime64[ns]', freq='D')
```

```python
#10

import pandas as pd
data = {'Brand' : ['Maruti', 'Renault', 'Hyundai'], 'Sales' : ['250', '200', '240']}
dataframe = pd.DataFrame.from_dict(data)
print(dataframe)
```

```
     Brand Sales
0   Maruti   250
1  Renault   200
2  Hyundai   240
```