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**San Francisco Bay University**

**CS483L - Artificial Intelligence & Machine Learning Lab**

**2022 Summer Quiz #1**

**Student Name: Mahmud Hamed Omer Student ID:19660**

**Instruction:**

1. **Put your answer right after each question in the answer sheet**

1. Create a dataframe as follows by the variable assignment of dictionary data type first as follows and then call the function in Pandas

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| --- | --- | --- |
| Id | Name | GPA |
| 12345 | John | 3.5 |
| 12346 | Mike | 3.45 |
| 12347 | Jim | 2.95 |
| 12348 | Peter | 3.12 |
| 12349 | Jack | 2.65 |
| 12350 | Andrew | 3.01 |
| 12351 | Adam | 3.70 |
| 12352 | Jeff | 2.89 |
| 12353 | David | 3.34 |
| 12354 | Kevin | 3.82 |

**Ans:**

**Code:**

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| --- |
| import pandas as pd  # dictionary data type  student\_info = {      "ID": [12345, 12346, 12347, 12348,12349, 12350,12351,12352,12353,12354],      "Name": ["John","Mike","Jim","Peter","Jack","Andrew","Adam","Jeff","David","Kevin"],      "GPA": [3.5,3.45 ,2.95,3.12,2.65,3.01,3.70,2.89,3.34,3.82]}  # dataframe from dict using the function from pd  df = pd.DataFrame.from\_dict(student\_info)  print(df) |

**Result:**

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2. Based on above dataframe, change record index to ***Name***

**Code:**

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| --- |
| import pandas as pd  # dictionary data type  student\_info = {      "ID": [12345, 12346, 12347, 12348,12349, 12350,12351,12352,12353,12354],      "Name": ["John","Mike","Jim","Peter","Jack","Andrew","Adam","Jeff","David","Kevin"],      "GPA": [3.5,3.45 ,2.95,3.12,2.65,3.01,3.70,2.89,3.34,3.82]}  # dataframe from dict using the function from pd  df = pd.DataFrame.from\_dict(student\_info)  print(df)  # setting index to "Name"  df = df.set\_index("Name")  print("\n After setting index to Name \n")  print(df) |

**Result:**

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3. Sort the GPA in the ascending order and then print it out

**Code:**

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| --- |
| import pandas as pd  # 1: dictionary to df  #dictionary data type  student\_info = {      "ID": [12345, 12346, 12347, 12348,12349, 12350,12351,12352,12353,12354],      "Name": ["John","Mike","Jim","Peter","Jack","Andrew","Adam","Jeff","David","Kevin"],      "GPA": [3.5,3.45 ,2.95,3.12,2.65,3.01,3.70,2.89,3.34,3.82]}  # dataframe from dict using the function from pd  df = pd.DataFrame.from\_dict(student\_info)  print(df)  # 2: setting index to "Name"  df = df.set\_index("Name")  print("\n After setting index to Name \n")  print(df)  # Sort the GPA in the ascending order and then print it out  print("\n GPA sorted in ascending order \n")  df = df.sort\_values(by=['GPA'], ascending=True)  print(df) |

**Result:**

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|  |

4. Add one more column for student’s attendance record

**Code:**

|  |
| --- |
| import pandas as pd  # 1: dictionary to df  #dictionary data type  student\_info = {      "ID": [12345, 12346, 12347, 12348,12349, 12350,12351,12352,12353,12354],      "Name": ["John","Mike","Jim","Peter","Jack","Andrew","Adam","Jeff","David","Kevin"],      "GPA": [3.5,3.45 ,2.95,3.12,2.65,3.01,3.70,2.89,3.34,3.82]}  # dataframe from dict using the function from pd  df = pd.DataFrame.from\_dict(student\_info)  print(df)  # 2: setting index to "Name"  df = df.set\_index("Name")  print("\n After setting index to Name \n")  print(df)  # 3: Sort the GPA in the ascending order and then print it out  df = df.sort\_values(by=['GPA'], ascending=True)  print("\n GPA sorted in ascending order \n")  print(df)  # 4: Add one more column for student’s attendance record  df = df.assign( Attendance = ["Yes","No","Yes","Yes","Yes","Yes","Yes","No","No","No"])  print("\n df with student attendance coloumn \n")  print(df) |

**Result:**

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