**Pandas part 1:**

import pandas as pd

def main():

states = pd.Series(data=['Nebraska','Kansas','Illinois'],index=['Kobe','Caleb','Rachel'])

print(states)

favorite\_animal = pd.Series(data=['Capybara','Bear','Monkey'],index=['Kobe','Caleb','Rachel'])

print(favorite\_animal)

favorite\_food= pd.Series(data=['Pasta','Subs','Pizza'],index=['Kobe','Caleb','Rachel'])

print(favorite\_food)

data1 = {'States': ['Nebraska','Kansas','Illinois'],

'Animal': ['Capybara','Bear','Monkey'],'Food': ['Pasta','Subs','Pizza']}

df=pd.DataFrame(data=data1, index=['Kobe','Caleb','Rachel'])

print(df)

main()

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**Pandas part 2:**

import pandas as pd

def main():

reviewDF=pd.read\_csv('/Users/kvoss/Library/CloudStorage/OneDrive-UniversityofArizona/MIS 301/IC Group Assignments/review\_phx\_class.csv')

pd.set\_option('display.max\_columns', None)

print(reviewDF.head(500))

df2 = reviewDF.fillna(-1)

print(df2.head(500))

main()

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**Pandas part 3:**

import pandas as pd

def main():

question\_one()

question\_two()

question\_three()

question\_four()

question\_five()

def question\_one():

reviewDF=pd.read\_csv('/Users/kvoss/Library/CloudStorage/OneDrive-UniversityofArizona/MIS 301/IC Group Assignments/review\_phx\_class.csv')

pd.set\_option('display.max\_columns', None)

avg\_max\_zip = reviewDF.groupby(['is\_open']).agg(

avg\_rating = ('stars', 'mean'),

max\_reviews = ('review\_count', 'max')

).reset\_index()

print(avg\_max\_zip)

def question\_two():

reviewDF=pd.read\_csv('/Users/kvoss/Library/CloudStorage/OneDrive-UniversityofArizona/MIS 301/IC Group Assignments/review\_phx\_class.csv')

pd.set\_option('display.max\_columns', None)

std\_ratings\_review\_zip = reviewDF.groupby(['postal\_code']).agg(

std\_dev\_ratings = ('stars', 'std'),

std\_review\_count = ('review\_count', 'std')

).reset\_index()

print(std\_ratings\_review\_zip)

def question\_three():

reviewDF=pd.read\_csv('/Users/kvoss/Library/CloudStorage/OneDrive-UniversityofArizona/MIS 301/IC Group Assignments/review\_phx\_class.csv')

pd.set\_option('display.max\_columns', None)

high\_rating\_comments = reviewDF.loc[(reviewDF['review\_count'] >= 100) &

(reviewDF['review\_count'] <= 200) &

(reviewDF['stars'] > 4.0),

['name']]

print(high\_rating\_comments)

def question\_four():

reviewDF=pd.read\_csv('/Users/kvoss/Library/CloudStorage/OneDrive-UniversityofArizona/MIS 301/IC Group Assignments/review\_phx\_class.csv')

pd.set\_option('display.max\_columns', None)

reviewDF['open\_restaurants\_stars'] = reviewDF.loc[(reviewDF['is\_open'] == 1),['stars']]

std\_dev\_stars\_open = reviewDF.groupby(['postal\_code']).agg(

std\_stars = ('open\_restaurants\_stars', 'std')

).reset\_index()

print(std\_dev\_stars\_open)

def question\_five():

reviewDF=pd.read\_csv('/Users/kvoss/Library/CloudStorage/OneDrive-UniversityofArizona/MIS 301/IC Group Assignments/review\_phx\_class.csv')

pd.set\_option('display.max\_columns', None)

reviewDF.drop\_duplicates(inplace=True)

reviewDF.fillna(0, inplace=True)

reviewDF['postal\_code'] = reviewDF['postal\_code'].astype('int64')

reviewDF['review\_count'] = reviewDF['review\_count'].astype('int64')

df2 = reviewDF.groupby(['postal\_code']).agg(

mean\_reviews = ('review\_count','mean')

).reset\_index()

df3 = reviewDF.merge(df2, how='inner', on='postal\_code')

df3['diff\_reviews'] = df3['review\_count'] - df3['mean\_reviews']

df3.to\_csv('new\_review\_phx\_class.csv', index=False)

main()

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Question 1:

A close up of numbers

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Question 2:

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Question 3:

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Question 4:

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Question 5:A screenshot of a computer

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