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COMP 4040-001
19 Apr 2023

Quiz 11 Screenshots and Source Code

	FirstName	Section	Grade	1_01	1_02	1_03	...	1_24	1_25	1_26	1_27	1_28	1_29
0	Student_1	6C	6	d	B	c	...	B	A	B	b	C	c
1	Student_2	6C	6	C	B	c	...	a	A	B	c	b	d
2	Student_3	6C	6	C	B	d	...	B	d	B	b	C	B
3	Student_4	6C	6	b	a	c	...						
4	Student_5	6C	6	b	B	d	...	a	b	a	c	b	a
..	...	...	...	...	...	...	...	...	...	...	...	...	...
99	Student_100	6D	6	d	B	c	...	d	b		c	a	c
100	Student_101	6C	6			A	...						
101	Student_102	6D	6	C	d	A	...		d		A	C	B
102	Student_103	6A	6	C	B	A	...	B	d	B	c	C	B
103	Student_104	6A	6	C	B	A	...	B	d	B		d	B

	Students	Cor Ans	Inc Ans	Oth Ans	Succ Rate	Fail Rate
0	Student_1	12	17	0	41.0	59.0
1	Student_2	10	17	2	34.0	66.0
2	Student_3	14	15	0	48.0	52.0
3	Student_4	6	14	9	21.0	79.0
4	Student_5	10	19	0	34.0	66.0
..	...	...	...	...	...	...
99	Student_100	6	22	1	21.0	79.0
100	Student_101	4	11	14	14.0	86.0
101	Student_102	10	16	3	34.0	66.0
102	Student_103	13	16	0	45.0	55.0
103	Student_104	16	12	1	55.0	45.0

```python
# COMP 4040-001 Quiz 11

import pandas as pd

df = pd.read_excel('student_benchmark_test_grades.xlsx')

print(df)

res = pd.DataFrame()  # begin with empty data frame
res["Students"] = df["FirstName"]  # first column: student names

cor_answers = []  # to store number of correct answers (will be converted to df row)
inc_answers = []  # to store number of incorrect answers
oth_answers = []  # to store number of other answers

# 1. get total correct answers
for i, row in df.iterrows():  # i is index (0, 1, ...), row is column name + column data (i.e.
FirstName Student_2)

    student_info = {}  # create dictionary for storing later
    correct_answers = 0  # tally variable

    for j, column in row.items():  # j is column name (i.e. 1_01), column is column data (i.e. b)
        student_info[j] = column  # {'FirstName': 'Student_1', 'Section': '6C'...} for each student

        if j != "FirstName" and j != "Section" and j != "Grade":  # these are the only columns we're
not concerned with
            if column.isupper() and column.isalpha():  # if the data is a correct answer
                correct_answers += 1

    cor_answers.append(correct_answers)
res["Cor Ans"] = cor_answers


# 2. get total incorrect answers
for i, row in df.iterrows():  # i is index (0, 1, ...), row is column name + column data (i.e.
FirstName Student_2)

    student_info = {}  # create dictionary for storing later
    incorrect_answers = 0  # tally variable

    for j, column in row.items():  # j is column name (i.e. 1_01), column is column data (i.e. b)
        student_info[j] = column  # {'FirstName': 'Student_1', 'Section': '6C'...} for each student
```

```python
        if j != "FirstName" and j != "Section" and j != "Grade":  # these are the only columns we're
not concerned with
            if column.islower() and column.isalpha():  # if the data is an incorrect answer
                incorrect_answers += 1

    inc_answers.append(incorrect_answers)
res["Inc Ans"] = inc_answers



# 3. get total other answers
for i, row in df.iterrows():  # i is index (0, 1, ...), row is column name + column data (i.e.
FirstName Student_2)

    student_info = {}  # create dictionary for storing later
    other_answers = 0  # tally variable

    for j, column in row.items():  # j is column name (i.e. 1_01), column is column data (i.e. b)
        student_info[j] = column  # {'FirstName': 'Student_1', 'Section': '6C'...} for each student

        if j != "FirstName" and j != "Section" and j != "Grade":  # these are the only columns we're
not concerned with
            if not column.isalpha():  # if the data is a non-letter answer
                other_answers += 1

    oth_answers.append(other_answers)
res["Oth Ans"] = oth_answers



# 4. Success rate
res["Suc Rate"] = round(res["Cor Ans"]/29, 2)*100



# 5. Failure rate
res["Fail Rate"] = round((res["Inc Ans"] + res["Oth Ans"])/29, 2)*100
print(res)

# 6. Convert dataframe to csv and output file for submission
res.to_csv("output.csv")
```