Q.1) Write a code to Read a file and append lines to a list.

```
with open('/content/sample_data/README.md', 'r') as f:
    lines = f.readlines()
    print(lines)
    lines.append('Hello World')
    print(lines)
```

(https://github.com/altair-viz/vega_datasets/blob/4f67bdaad10f45e3549984e17e1b3088c731503d/vega_datasets/_data/anscombe.json).\n']
(https://github.com/altair-viz/vega_datasets/blob/4f67bdaad10f45e3549984e17e1b3088c731503d/vega_datasets/_data/anscombe.json).\n', 'Hello World']

Q.2) Write a code to catch an Exception in python?

```
def divide(x, y):
    try:
        result = x / y
        print("Yeah ! Your answer is :", result)
    except ZeroDivisionError:
        print("Sorry ! You are dividing by zero ")
divide(3, 0)
```

```
...    Sorry ! You are dividing by zero
```

Q.3) Write a Python function that accepts a list containing strings and integers. Merge all string elements using # and add all integer elements. e.g. input list is ['100', 'welcome', 'hi', '200', '300', 'bye', 'welldone', '500'] Output should be: welcome#hi#bye#welldone# 1100

```
input = [100, 'welcome', 'hi', 200, 300, 'bye', 'welldone', 500]

string_elements = ([str(i) for i in input if isinstance(i, str)])

integer_elements = ([int(i) for i in input if isinstance(i, int)])

v1 = '#'.join(string_elements)
```

v2 = sum(integer_elements)

print(v1)

print(v2)

```
welcome#hi#bye#welldone
1100
```

Q.4) Write a script to sort a dictionary based on its values and find the sum of middle two values

input_dict = {"x": 5, "y": 15, "z": 25}

Output: Sorted Dictionary: {'x': 5, 'y': 15, 'z': 25}

Sum of middle two values: 15 + 5 = 20

or

input_dict = {"x": 5, "y": 15, "z": 25,"p":12}

Output: Sorted Dictionary: {'x': 5, 'p': 12,'y': 15, 'z': 25}

Sum of middle two values: 12 + 15 = 27

input_dict = {"x": 5, "y": 15, "z": 25,"p":12}

sorted_dict = dict(sorted(input_dict.items(), key=lambda x: x[1]))

print('Sorted dictionary: ',sorted_dict)

sumOfTwo = list(sorted_dict.values())[1] + list(sorted_dict.values())[-2]

print(f'Sum of middle two values: 12 + 15 = {sumOfTwo}')

```
Sorted dictionary:  {'x': 5, 'p': 12, 'y': 15, 'z': 25}
Sum of middle two values: 12 + 15 = 27
```