Interview Question

## Question:

# Below is the scenario about system error tickets sending to IT. Please come up with a report about count of tickets by year, month and priority.

# Input: list of dictionary of issues, can contain dupes

# Example data:

# issue\_number: 1:

# name: Connection time out with 500 error;

# description: This issue is blocking us a lot and is top priority. priority: P0;

# created\_date: 2021-08-21

# issue\_number: 2

# name: Duplicate requests are not handling right

# description: Not urgent, but it would be good to deduplicate the requests. priority: P2

# created\_date: 2021-07-30

# issue\_number: 3

# name: Sync time takes more than 1 day

# description: Initial sync takes more than 1 day. priority: P2

# created\_date: 2021-07-28

# Output: Return a list that contains: year, month, priority, count of tickets.

# Example output:

# 2021, 08, P0, 1

# 2021, 07, P2, 2

—-------------------------------------------

**Test Case # 1:**

Input:

[

{

"issue\_number": 1,

"name": "Connection time out with 500 error",

"description": "This issue is blocking us a lot. priority: P0",

"created\_date": "2021-08-01"

},

{

"issue\_number": 2,

"name": "Duplicate requests are not handling right",

"description": "Not urgent, but it would be good to deduplicate the requests: priority: P2",

"created\_date": "2021-07-30"

},

{

"issue\_number": 3,

"name": "Sync time takes more than 1 day",

"description": "Initial sync takes more than 1 day, priority: P2",

"created\_date": "2021-07-28"

}

]

Output:

2021, 08, P0, 1

2021, 07, P2, 2

**Test Case # 2** (priority regex i):

Skill tested: python strings, regex, string manipulations

Input:

[

{

"issue\_number": 1,

"name": "Connection time out with 500 error",

"description": "This issue is blocking us a lot and is a top priority. priority: P0",

"created\_date": "2021-08-01"

},

{

"issue\_number": 2,

"name": "Duplicate requests are not handling right",

"description": "Not urgent, but it would be good to deduplicate the requests, low priority: priority: P2",

"created\_date": "2021-07-30"

},

{

"issue\_number": 3,

"name": "Sync time takes more than 1 day",

"description": "Initial sync takes more than 1 day, priority: P2",

"created\_date": "2021-07-28"

}

]

Output:

2021, 08, P0, 1

2021, 07, P2, 2

**Test Case # 3** (priority need not be always present at the end of string), duplicates handling - dont count dupes):

Skill testes: problem solving, dictionaries, python collections

Input:

[

{

"issue\_number": 1,

"name": "Connection time out with 500 error",

"description": "This issue is blocking us a lot and, priority: P0, is a top priority.",

"created\_date": "2021-08-01"

},

{

"issue\_number": 2,

"name": "Duplicate requests are not handling right",

"description": "Not urgent, but it would be good to deduplicate the requests, low priority: priority: P2",

"created\_date": "2021-07-30"

},

{

"issue\_number": 3,

"name": "Sync time takes more than 1 day",

"description": "Initial sync takes more than 1 day, priority: P2",

"created\_date": "2021-07-28"

},

{

"issue\_number": 3,

"name": "Sync time takes more than 1 day",

"description": "Initial sync takes more than 1 day, priority: P2",

"created\_date": "2021-07-28"

}

]

Output:

2021, 08, P0, 1

2021, 07, P2, 2

## Solution:

Time complexity: O(n)

Space complexity: O(n)

import re

*#input, there can be dupes issues.*

issue\_list = [

{

"issue\_number": 1,

"name": "Connection time out with 500 error",

"description": "This issue is blocking us a lot and is a top priority. priority: P0",

"created\_date": "2021-08-01"

},

{

"issue\_number": 2,

"name": "Duplicate requests are not handling right",

"description": "Not urgent, but it would be good to deduplicate the requests, low priority: priority: P2",

"created\_date": "2021-07-30"

},

{

"issue\_number": 3,

"name": "Sync time takes more than 1 day",

"description": "Initial sync takes more than 1 day, priority: P2",

"created\_date": "2021-07-28"

},

{

"issue\_number": 3,

"name": "Sync time takes more than 1 day",

"description": "Initial sync takes more than 1 day, priority: P2",

"created\_date": "2021-07-28"

}

]

report = []

count\_ticket = {}

count\_id = {}

for issue in issue\_list:

id = issue["issue\_number"]

if id not in count\_id.keys():

count\_id[id] = 1

date = issue["created\_date"].split("-")

year = date[0]

month = date[1]

priority = re.findall("P[0-9]", issue["description"])[0]

key = str(year)+ "-" + str(month) + "-"+ str(priority)

if not key in count\_ticket:

count\_ticket[key] = 1

else: count\_ticket[key] += 1

report = sorted(count\_ticket.items(), reverse=True)

print(report)

*#display the report*

for x in report:

z = x[0].split('-')

year = z[0]

month = z[1]

priority = z[2]

print(year, month, priority, x[1])