

TASK-1 OF DELOITTE STEM VIRTUAL INTERNSHIP

TASK-1

CODE:

```
import json, unittest, datetime
```

```
with open("./data-1.json","r") as f:
```

```
    jsonData1 = json.load(f)
```

```
with open("./data-2.json","r") as f:
```

```
    jsonData2 = json.load(f)
```

```
with open("./data-result.json","r") as f:
```

```
    jsonExpectedResult = json.load(f)
```

```
def convertFromFormat1 (jsonObject):
```

```
    # IMPLEMENT: Conversion From Type 1
```

```
    return NotImplemented
```

```
def convertFromFormat2 (jsonObject):
```

```
    # IMPLEMENT: Conversion From Type 1
```

```
return NotImplemented
```

```
def main (jsonObject):
```

```
    result = {}
```

```
    if (jsonObject.get('device') == None):
```

```
        result = convertFromFormat1(jsonObject)
```

```
    else:
```

```
        result = convertFromFormat2(jsonObject)
```

```
    return result
```

```
class TestSolution(unittest.TestCase):
```

```
    def test_sanity(self):
```

```
        result = json.loads(json.dumps(jsonExpectedResult))
```

```
        self.assertEqual(
```

```
            result,
```

```
            jsonExpectedResult
```

```
        )
```

```
    def test_dataType1(self):
```

```

result = main (jsonData1)
self.assertEqual(
    result,
    jsonExpectedResult,
    'Converting from Type 1 failed'
)

def test_dataType2(self):

    result = main (jsonData2)
    self.assertEqual(
        result,
        jsonExpectedResult,
        'Converting from Type 2 failed'
    )

if __name__ == '__main__':
    unittest.main()

```

DESCRIPTION:

THE ABOVE RETURN CODE IS THERE ARE 2 DATA FORMATS GIVEN WITH THE SAME MESSAGE.

Now the result code should give the solution for in an unified format.here the packages used are json, unittest , datetime.

Json file : (Java Script object notation) is a light weight interchange format commonly used for transmitting data b/w a server and web application.

Unittest : it is a built in module in python that provides a framework for writing and unit test it allow to define test cases.

Once imported the unittest module you can start writing your test by creating subclasses
"unittest .test("

-->Data time : this module is used to define the date and time and day.

*The code process :

- 1) It imports the required modules json,"unittest and date time "
- 2)it read the content of JSON files and assigns the loaded data to json Data.
- 3)It define "Convert from format" function which takes a JSON object as input and convert it into largest unified format used in "data result json"
- 4)it define the "convert from format"function which also take as a json object and convert into the target format .This function handles a different data structure.compared to "convert from format " and perform the necessary transformation.
- 5)It defines a test case class "Test solution"that inherits from "unit test testcase".This class contain three test method .test tests test data type 1; and test data-result json.
- 6)The test-sanity method checks if the conversion result matches the expected result from data-result json
- 7) the test-data type1 and test-data type1 methods test the main function by passing jsonData1 and jsonData2 and comparing
- 8)finally unittest main() function is called to test.