Unit 1.2 Graded Assignment: 1

Instructions:

Write a dataclass describing a mountain (containing fields for name and elevation) and:
- Construct an instance of the dataclass
- Convert it to string

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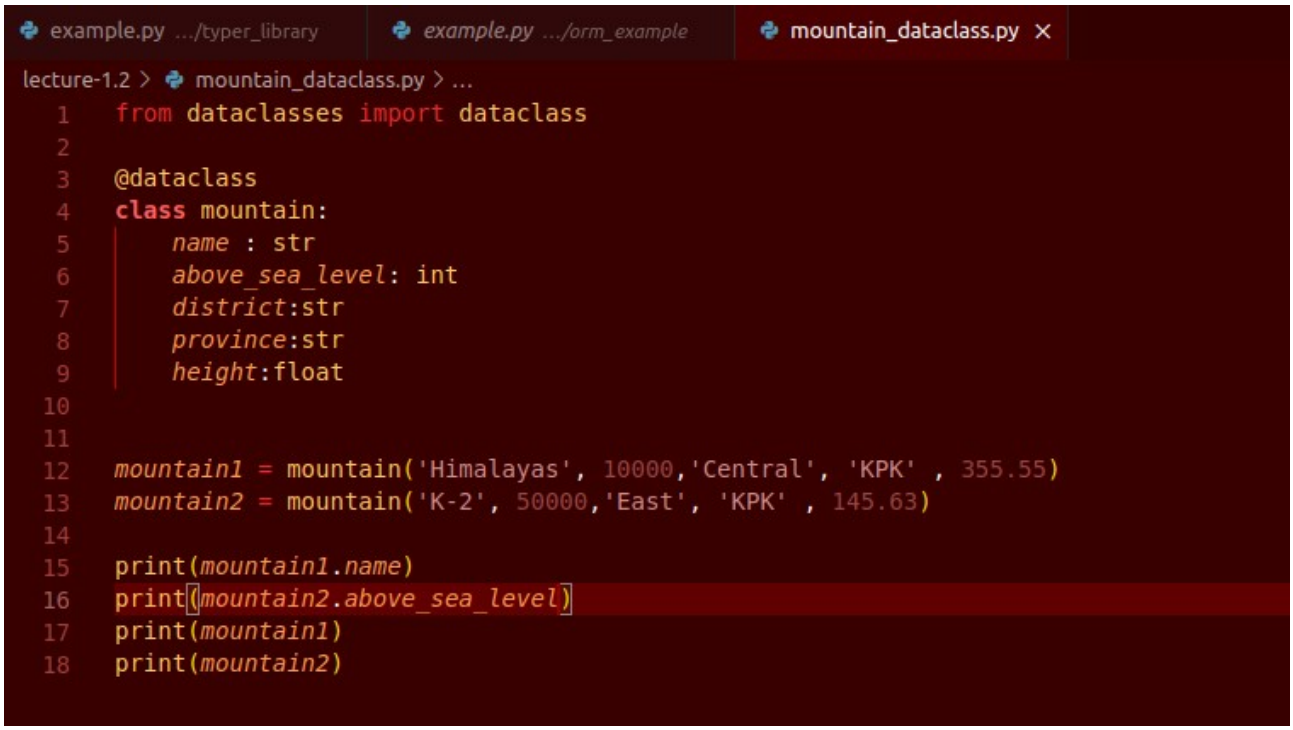
Solution:

In this assignment we have implemented dataclass library that is describing a mountain class. In the mountain class wee have multiple variable like name, above sea level and etc these variables are define as string and integers. An @dataclass annotation was used to implement the function which dirctly initialize the class without requiring a constructor.

1. First we have imported dataclass library, then we have built a class name mountain, with different variables.



2. In the second step we have pass values into the mountain class,and print them out:

mountain1 = mountain('Himalayas', 10000,'Central', 'KPK' , 355.55)
mountain2 = mountain('K-2', 50000,'East', 'KPK' , 145.63)
print(mountain1.name)
print(mountain2.above_sea_level)
print(mountain1)
print(mountain2)

```python
from dataclasses import dataclass

@dataclass
class mountain:
    name : str
    above_sea_level: int
    district:str
    province:str
    height:float


mountain1 = mountain('Himalayas', 10000,'Central', 'KPK' , 355.55)
mountain2 = mountain('K-2', 50000,'East', 'KPK' , 145.63)

print(mountain1.name)
print(mountain2.above_sea_level)
print(mountain1)
print(mountain2)
```

```
ali@all-MS-7D35:~/Desktop/emertus-lecture$  /usr/bin/env /bin/python3 /home/ali/.vscode/extensions/ms-python.python-2023.6.0/pythonFiles/lib/python/debugpy/adapter/../../debugpy/
launcher 50143 -- /home/ali/Desktop/emertus-lecture/lecture-1.2/mountain_dataclass.py
Himalayas
50000
mountain(name='Himalayas', above_sea_level=10000, district='Central', province='KPK', height=355.55)
mountain(name='K-2', above_sea_level=50000, district='East', province='KPK', height=145.63)
ali@all-MS-7D35:~/Desktop/emertus-lecture$
```

3. The second task was to convert it into str which is also performed:

```python
from dataclasses import dataclass

@dataclass
class mountain:
    name : str
    above_sea_level: int
    district:str
    province:str
    height:float


mountain1 = mountain('Himalayas', 10000,'Central', 'KPK' , 355.55)
mountain2 = mountain('K-2', 50000,'East', 'KPK' , 145.63)
strr = str(mountain2.above_sea_level)
method_strr = str(mountain1)
print(mountain1.name)

print(type(strr))
print(type(method_strr))
```

```
ali@all-MS-7D35:~/Desktop/emertus-lecture$  cd /home/ali/Desktop/emertus-lecture ; /usr/bin/env /bin/python3 /home/ali/.vscode/extensions/ms-python.python-2023.6.0/pythonFiles/li
b/python/debugpy/adapter/../../debugpy/launcher 48157 -- /home/ali/Desktop/emertus-lecture/lecture-1.2/mountain_dataclass.py
Himalayas
<class 'str'>
<class 'str'>
ali@all-MS-7D35:~/Desktop/emertus-lecture$
```