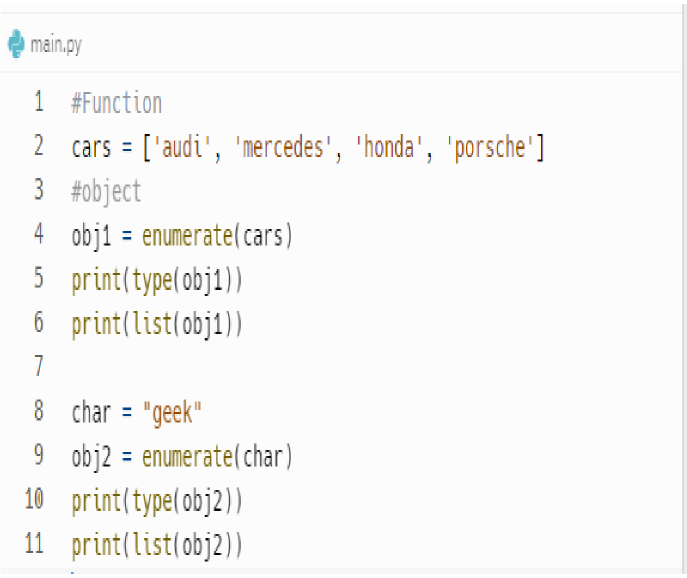
Task 05

Topics: Enumerate() function, Timing Your Code, User Inputs, Conditionals, Introducing Set, Union, Intersection, Difference, Symmetric Difference, Making Data Unique with Sets

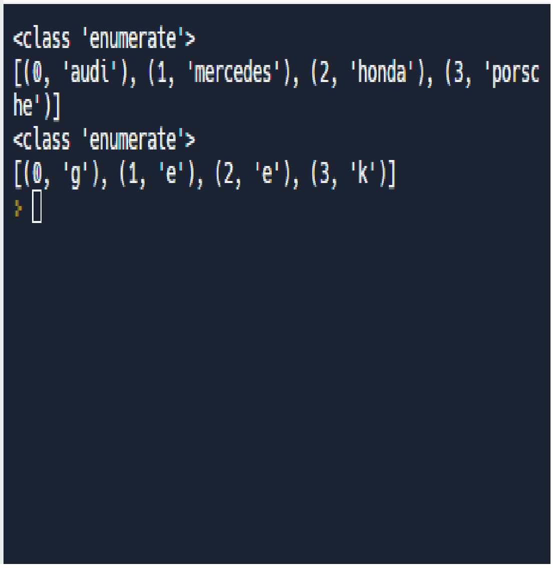
Enumerate() function



main.py

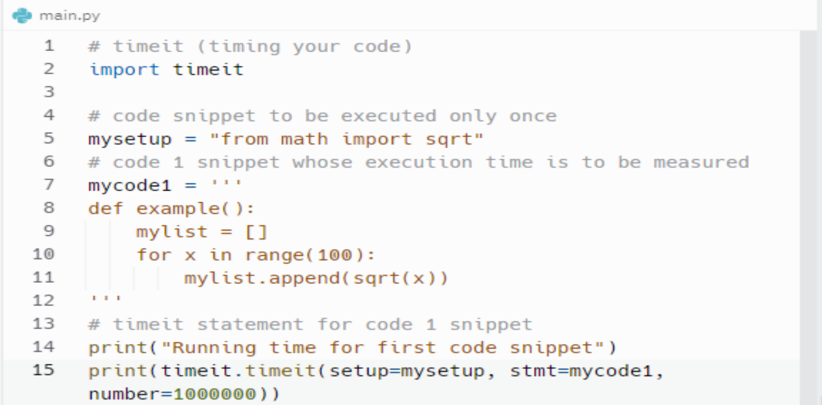
```python
#Function
cars = ['audi', 'mercedes', 'honda', 'porsche']
#object
obj1 = enumerate(cars)
print(type(obj1))
print(list(obj1))

char = "geek"
obj2 = enumerate(char)
print(type(obj2))
print(list(obj2))
```



```
<class 'enumerate'>
[(0, 'audi'), (1, 'mercedes'), (2, 'honda'), (3, 'porsc
he')]
<class 'enumerate'>
[(0, 'g'), (1, 'e'), (2, 'e'), (3, 'k')]
›
```

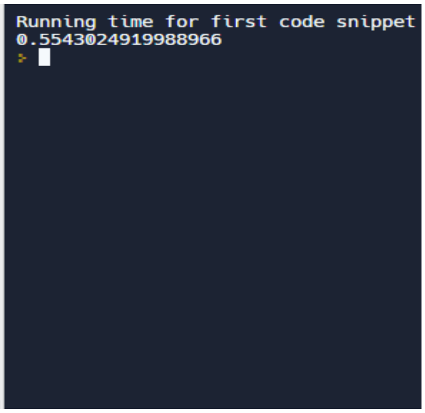
Timing Your Code



main.py

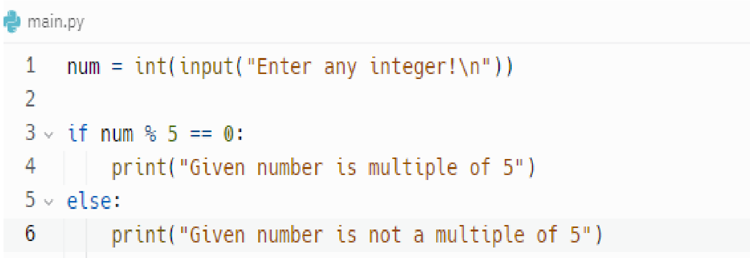
```python
# timeit (timing your code)
import timeit

# code snippet to be executed only once
mysetup = "from math import sqrt"
# code 1 snippet whose execution time is to be measured
mycode1 = '''
def example():
    mylist = []
    for x in range(100):
        mylist.append(sqrt(x))
'''
# timeit statement for code 1 snippet
print("Running time for first code snippet")
print(timeit.timeit(setup=mysetup, stmt=mycode1,
number=1000000))
```



```
Running time for first code snippet
0.5543024919988966
›
```

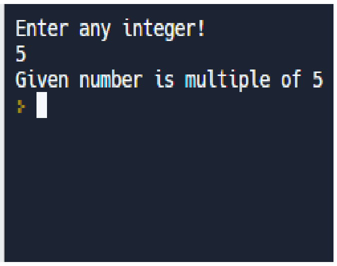
User Inputs



main.py

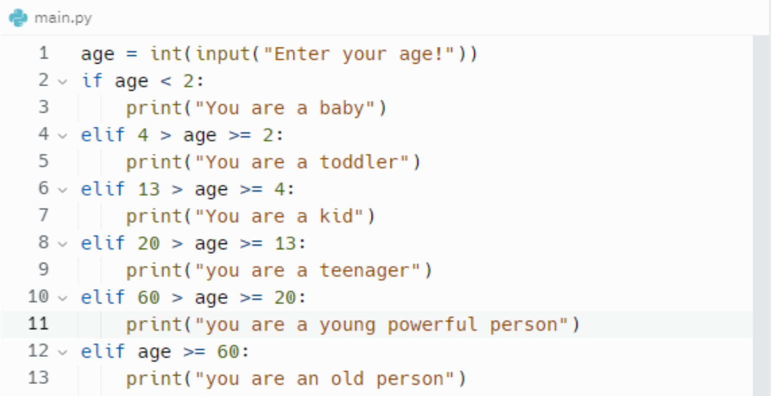
```python
num = int(input("Enter any integer!\n"))

if num % 5 == 0:
    print("Given number is multiple of 5")
else:
    print("Given number is not a multiple of 5")
```



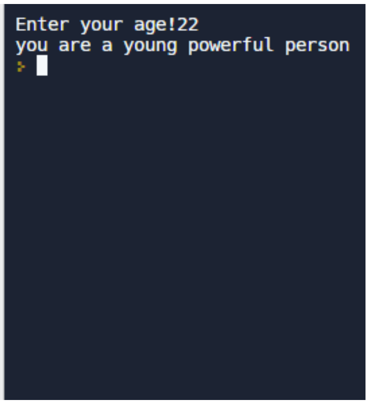
```
Enter any integer!
5
Given number is multiple of 5
```

Conditionals



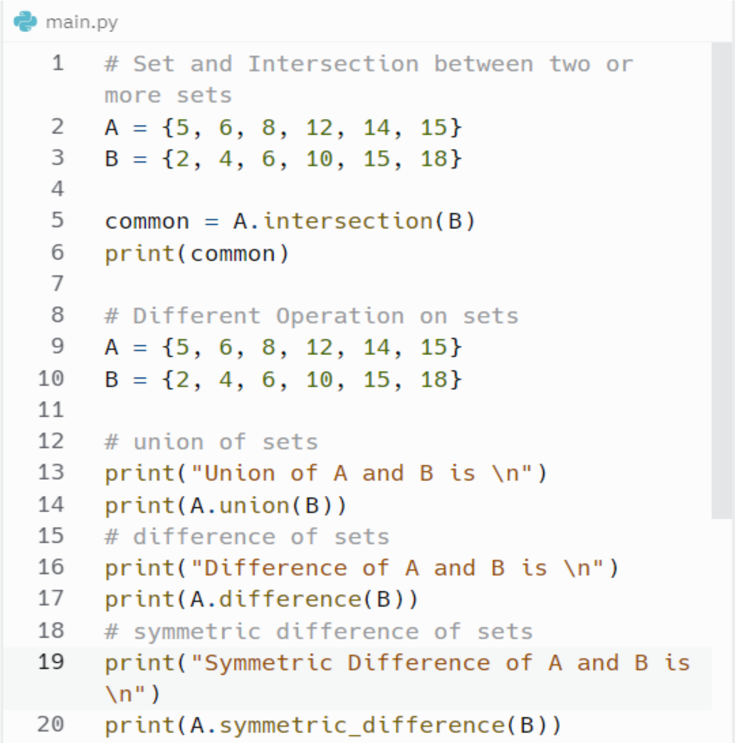
main.py

```python
age = int(input("Enter your age!"))
if age < 2:
    print("You are a baby")
elif 4 > age >= 2:
    print("You are a toddler")
elif 13 > age >= 4:
    print("You are a kid")
elif 20 > age >= 13:
    print("you are a teenager")
elif 60 > age >= 20:
    print("you are a young powerful person")
elif age >= 60:
    print("you are an old person")
```



```
Enter your age!22
you are a young powerful person
```

Sets



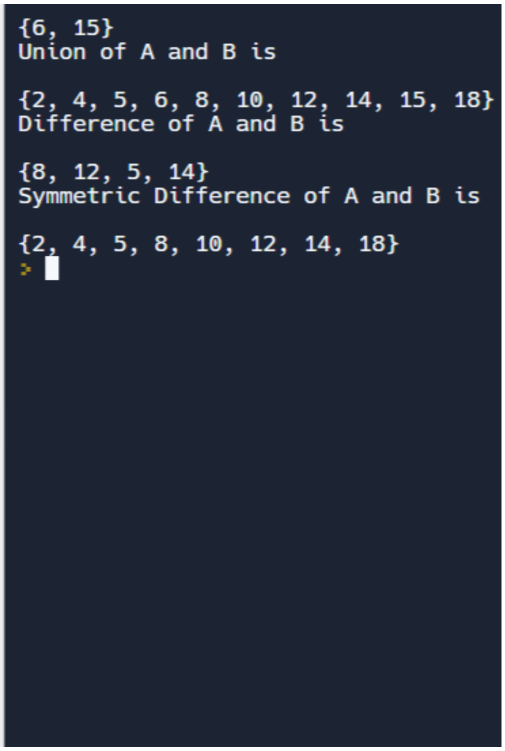
main.py

```python
# Set and Intersection between two or more sets
A = {5, 6, 8, 12, 14, 15}
B = {2, 4, 6, 10, 15, 18}

common = A.intersection(B)
print(common)

# Different Operation on sets
A = {5, 6, 8, 12, 14, 15}
B = {2, 4, 6, 10, 15, 18}

# union of sets
print("Union of A and B is \n")
print(A.union(B))
# difference of sets
print("Difference of A and B is \n")
print(A.difference(B))
# symmetric difference of sets
print("Symmetric Difference of A and B is \n")
print(A.symmetric_difference(B))
```



```
{6, 15}
Union of A and B is

{2, 4, 5, 6, 8, 10, 12, 14, 15, 18}
Difference of A and B is

{8, 12, 5, 14}
Symmetric Difference of A and B is

{2, 4, 5, 8, 10, 12, 14, 18}
```