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Roll no.: 96

Batch: S22

Sets and Dictionary

CODE:

```
students = {"Om", "shivam", "Aniket", "Kunal", "Vamshi", "Om", True, 1, 0, False}
```

```
print(students)
```

```
print(type(students))
```

```
print(len(students))
```

```
set1 = set(("raspberry", "banana", "Orange", "Mango", "Apple", "cherry"))
```

```
print(set1)
```

```
for x in set1:
```

```
    print(x)
```

```
set2 = {"raspberry", "banana", "Orange", "Mango", "Apple", 10, 30}
```

```
print("banana" in set2)
```

```
students = {"Om", "shivam", "Aniket", "Kunal", "Vamshi"}
```

```
students.add("atharva")
```

```
print(students)
```

```
set1 = {"banana", "Orange", "Mango", "Apple", 10, True}
```

```
students.update(set1)
```

```
print(students)
```

```
students = {"Om", "shivam", "Aniket", "Kunal", "Vamshi"}
```

```
students.remove("Kunal")
```

```
print(students)

students = {"Om", "shivam", "Aniket", "Kunal", "Vamshi"}

students.discard("Om")

print(students)

students.pop()

print(students)

students.clear()

print(students)

del students

students = {"Om", "shivam", "Aniket", "Kunal", "Vamshi"}

set1 = {"banana", "Orange", "Mango", "Apple", 10, True}

final_set = students.union(set1)

print(final_set)

set3 = {"banana", "Orange", "Mango"}

set4 = {"Om", "shivam", "Mango"}

set3.intersection_update(set4)

print(set3)

set3 = {"banana", "Orange", "Mango"}

set4 = {"Om", "shivam", "Mango"}

inter_set = set3.intersection(set4)

print(inter_set)

set3 = {"banana", "Orange", "Mango"}

set4 = {"Om", "shivam", "Mango"}
```

```
set3.symmetric_difference_update(set4)
```

```
print(set3)
```

```
set3 = {"banana", "Orange", "Mango"}
```

```
set4 = {"Om", "shivam", "Mango"}
```

```
sym_set = set3.symmetric_difference(set4)
```

```
print(sym_set)
```

```
fruits = {"banana", "Orange", "Mango"}
```

```
x = fruits.copy()
```

```
print(x)
```

```
set3 = {"banana", "Orange", "Mango"}
```

```
set4 = {"Om", "shivam", "Mango"}
```

```
z = set3.difference(set4)
```

```
print(z)
```

```
set3 = {"banana", "Orange", "Mango"}
```

```
set4 = {"Om", "shivam", "Mango"}
```

```
set3.difference_update(set4)
```

```
print(set3)
```

```
set3 = {"banana", "Orange", "Mango"}
```

```
set4 = {"Om", "shivam", "apple"}
```

```
z = set3.isdisjoint(set4)
```

```
print(z)
```

```
set3 = {"banana", "Orange", "Mango", "Apple", "cherry"}
```

```
set4 = {"banana", "Orange", "Mango"}
```

```

z = set4.issubset(set3)

print(z)

set3 = {"banana", "Orange", "Mango", "Apple", "cherry"}

set4 = {"banana", "Orange", "Mango"}

z = set3.issuperset(set4)

print(z)

```

Output:

```

{0, True, 'Vamshi', 'shivam', 'Aniket', 'Om', 'Kunal'}
<class 'set'>
7
{'banana', 'Apple', 'raspberry', 'Orange', 'Mango', 'cherry'}
banana
Apple
raspberry
Orange
Mango
cherry
True
{'atharva', 'Vamshi', 'Aniket', 'shivam', 'Om', 'Kunal'}
{'atharva', 'Vamshi', True, 'banana', 'Aniket', 'shivam', 'Apple', 10, 'Kunal',
'Orange', 'Mango', 'Om'}
{'Vamshi', 'Aniket', 'shivam', 'Om'}
{'Vamshi', 'Aniket', 'shivam', 'Kunal'}
{'Aniket', 'shivam', 'Kunal'}
set()
{True, 'Vamshi', 'banana', 'Aniket', 'shivam', 'Apple', 10, 'Kunal', 'Orange',
'Mango', 'Om'}
{'Mango'}
{'Mango'}
{'banana', 'shivam', 'Orange', 'Om'}
{'banana', 'shivam', 'Orange', 'Om'}
{'banana', 'Orange', 'Mango'}

```

```
{'banana', 'Orange'}
```

```
{'banana', 'Orange'}
```

```
True
```

```
True
```

```
True
```

=== Code Execution Successful ===

Functions:

```
student = {"name": "Om",
```

```
"age": 19,
```

```
"gender": "male",
```

```
"branch": "IT"}
```

```
print(student)
```

```
print(len(student))
```

```
print(type(student))
```

```
print(student["name"])
```

```
x = student.get("name")
```

```
print(x)
```

```
student1 = dict(name="Aniket",
```

```
gender="male")
```

```
print(student1)
```

```
x = student.keys()
```

```
print(x)
```

```
student["DOB"] = 2005
```

```
print(student)
```

```
x = student.values()

print(x)

student["name"] = "Om Pawaskar"

print(student)

x = student.items()

print(x)

student["name"] = "Om"

print(x)

student = {"name": "Om",

"age": 19,

"gender": "male",

"branch": "IT"}

student.update({"name": "Om

Pawaskar"})

print(student)

student.update({"DOB": 2005})

print(student)

student.pop("DOB")

print(student)

student = {"name": "Om",

"age": 19,

"gender": "male",

"branch": "IT"}
```

```
student.popitem()

print(student)

student = {"name": "Om",

"age": 19,

"gender": "male",

"branch": "IT"}

print(student)

del student["branch"]

print(student)

student.clear()

print(student)

del student

student = {"name": "Om",

"age": 19,

"gender": "male",

"branch": "IT"}

for x in student:

    print(x)

for x in student:

    print(student[x])

for x in student.keys():

    print(x)

for x in student.values():
```

```
    print(x)

for x in student.items():

    print(x)

new_dict = student.copy()

print(new_dict)

new_dict1 = dict(student)

print(new_dict1)

all_student = {"student1":

{

"name": "Om",

"age": 19,

"gender": "male",

"branch": "IT"

},

"student2":

{

"name": "Aniket",

"age": 18,

"gender": "male",

"branch": "IT"

}

}

print(all_student)
```



```
print(all_student["student1"]["name  
"])
```

```
x = ("key1", "key2", "key3")
```

```
y = 0
```

```
new_dict = dict.fromkeys(x, y)
```

```
print(new_dict)
```

```
student = {"name": "Om",
```

```
"age": 19,
```

```
"gender": "male"}
```

```
x = student.setdefault("branch",
```

```
"IT")
```

```
print(x)
```

Output:

```
{'name': 'Om', 'age': 19, 'gender': 'male', 'branch': 'IT'}
4
<class 'dict'>
Om
Om
{'name': 'Aniket', 'gender': 'male'}
dict_keys(['name', 'age', 'gender', 'branch'])
{'name': 'Om', 'age': 19, 'gender': 'male', 'branch': 'IT', 'DOB': 2005}
dict_values(['Om', 19, 'male', 'IT', 2005])
{'name': 'Om Pawaskar', 'age': 19, 'gender': 'male', 'branch': 'IT', 'DOB':
2005}
dict_items([('name', 'Om Pawaskar'), ('age', 19), ('gender', 'male'), ('branch',
'IT'), ('DOB', 2005)])
dict_items([('name', 'Om'), ('age', 19), ('gender', 'male'), ('branch', 'IT'),
('DOB', 2005)])
{'name': 'Om Pawaskar', 'age': 19, 'gender': 'male', 'branch': 'IT'}
{'name': 'Om Pawaskar', 'age': 19, 'gender': 'male', 'branch': 'IT', 'DOB':
2005}
{'name': 'Om Pawaskar', 'age': 19, 'gender': 'male', 'branch': 'IT'}
{'name': 'Om', 'age': 19, 'gender': 'male'}
{'name': 'Om', 'age': 19, 'gender': 'male', 'branch': 'IT'}
{'name': 'Om', 'age': 19, 'gender': 'male'}
{}
name
age
gender
branch
Om
19
male
IT
name
age
gender
branch
Om
19
male
IT
('name', 'Om')
('age', 19)
('gender', 'male')
('branch', 'IT')
{'name': 'Om', 'age': 19, 'gender': 'male', 'branch': 'IT'}
{'name': 'Om', 'age': 19, 'gender': 'male', 'branch': 'IT'}
{'student1': {'name': 'Om', 'age': 19, 'gender': 'male', 'branch': 'IT'},
'student2': {'name': 'Aniket', 'age': 18, 'gender': 'male', 'branch': 'IT'}}
Om
```

```
{'key1': 0, 'key2': 0, 'key3': 0}  
IT
```

```
=== Code Execution Successful ===
```