



Submission-1



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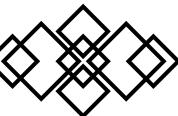
Branch: CSE-1

Semistor: 3

Name of the lab: Adv Python lab

Professor: Satya Keerthi Gorripati

Links:



Week0: Lists

A screenshot of a Jupyter Notebook interface showing a code cell for 'list.py'. The code demonstrates various list operations like creation, printing, concatenation, modification, and deletion. The output shows the execution of the script and its results.

```
list.py > ...
1 #List and method of list
2 #create the list
3 animals = ['cat', 'dog', 'rabbit', 'horse']
4 #print list
5 print(animals)
6 #print the length of the list
7 print(len(animals))
8 #appened the list
9 animals.append('cow')
10 #print the list
11 print(animals)
12 #insert unig the index
13 animals.insert(0, 'tiger')
14 #concatce the list
15 birds=[ 'parrot', 'sparrow']
16 print(animals+birds)
17 #remove the element
18 animals.remove('rabbit')
19 #sort the list
20 animals.sort()
21 #reverse the list
22 animals.reverse()
23 #clear the list
24 animals.clear()

~/ADV-Python-Lab323103310032$ python list.py
['cat', 'dog', 'rabbit', 'horse']
4
['cat', 'dog', 'rabbit', 'horse', 'cow']
['tiger', 'cat', 'dog', 'rabbit', 'horse', 'cow', 'parrot', 'sparrow']
~/ADV-Python-Lab323103310032$
```

Sets:

A screenshot of a Jupyter Notebook interface showing a code cell for 'set.py'. The code illustrates various set operations such as creation, addition, removal, and set operations like union, intersection, and difference. The output shows the execution of the script and its results.

```
list.py | set.py > ...
1 #Set and its methods
2 #create the set
3 set1 = {1,4,6,7,8,9}
4 #print the set
5 print(set1)
6 #add the element
7 set1.add(10)
8 #len of the set
9 print(len(set1))
10 #remove the element
11 set1.remove(4)
12 #sum of the set
13 print(sum(set1))
14 #union of the set
15 set2 = {1,2,3,4,5}
16 print(set1.union(set2))
17 #intersection of the set
18 print(set1.intersection(set2))
19 #difference of the set
20 print(set1.difference(set2))
21 #clear the set
22 set1.clear()

~/ADV-Python-Lab323103310032$ python set.py
{1, 4, 6, 7, 8, 9}
7
41
{1, 2, 3, 4, 5, 6, 7, 8, 9, 10}
{1}
{6, 7, 8, 9, 10}
~/ADV-Python-Lab323103310032$
```

Tuple:

The screenshot shows a Jupyter Notebook interface with the following details:

- File Bar:** ADV Python Lab(323103310032) | CPU/RAM LIMITED
- Code Cell:** tuple.py (selected)
- Code Content:**

```
1 #Tuple and its methods
2 #create the tuple
3 student = ("Charan", 32, "CSE", 20)
4 print(student)
5 #len of the tuple
6 print(len(student))
7 #count the element
8 print(student.count(32))
9 #index of the element
10 print(student.index("CSE"))
11 #slice the tuple
12 print(student[0:2])
13 #reverse the tuple
14 print(student[::-1])
15 #clear the tuple
16 #the tuples are immutable
```
- Output Cell:** Shell
- Output Content:**

```
~/ADV-Python-Lab323103310032$ python tuple.py
('Charan', 32, 'CSE', 20)
4
1
2
('Charan', 32)
(20, 'CSE', 32, 'Charan')
~/ADV-Python-Lab323103310032$
```

Dictionary:

The screenshot shows a Jupyter Notebook interface with the following details:

- File Bar:** ADV Python Lab(323103310032) | CPU/RAM LIMITED
- Code Cell:** dict.py (selected)
- Code Content:**

```
1 #Dictionary and its methods
2 #create the dictionary
3 dist1 = {"MJ": {"USA": 23}, "CR7": {"Portugal": 7}, "Messi": {"Argentina": 10}}
4 #print the dictionary
5 print(dist1)
6 #len of the dictionary
7 print(len(dist1))
8 #access the value
9 print(dist1["MJ"])
10 #update the value
11 dist1["CR7"]["Portugal"] = 8
12 #remove the value
13 dist1.pop("Messi")
14 #keys of the dictionary
15 print(dist1.keys())
16 #values of the dictionary
17 print(dist1.values())
18 #items of the dictionary
19 print(dist1.items())
20 #updating the dictionary
21 dist1.update({"CR7": {"Portugal": 8}})
22 #copy the dictionary
23 dist2 = dist1.copy()
24 #clear the dictionary
25 dist1.clear()
```
- Output Cell:** Shell
- Output Content:**

```
~/ADV-Python-Lab323103310032$ python dict.py
{'MJ': {'USA': 23}, 'CR7': {'Portugal': 7}, 'Messi': {'Argentina': 10}}
3
{'USA': 23}
dict_keys(['MJ', 'CR7'])
dict_values([{'USA': 23}, {'Portugal': 8}])
dict_items([('MJ', {'USA': 23}), ('CR7', {'Portugal': 8})])
~/ADV-Python-Lab323103310032$
```

Week1

Exception Handling:

```
exception.py 1 expEntry.py expAge.py
python > Week1 > exception.py > ...
1 #ValueError
2 try:
3     x=int("Python")
4     y="Hello"
5     print(x+y)
6
7 except ValueError:
8     print("ValueError Found")
9
10 #IndexError
11 try:
12     arr=[2,3,4,5,6]
13     print(arr[7])
14
15 except IndexError:
16     print("Index Error")
17
18 #NameError
19 try:
20     Q=10
21     print(g)
22
23
24 except NameError:
25     print("NameError handled")
26
27 #ZeroDivisionError
28 try:
29     x=5
30     y=x/0
31     print(y)
32
33 except ZeroDivisionError:
34     print("ZeroDivisionError found")
35
36 #TypeError
37 try:
38     x=5
39     s="Hello"
40     print(x+s)
41
42 except TypeError:
43     print("TypeValue Error")
44
```

```
exception.py 1
python > Week1 > exception.py > ...
17
18 #NameError
19 try:
20     Q=10
21     print(g)
22
23
24 except NameError:
25     print("NameError handled")
26
27 #ZeroDivisionError
28 try:
29     x=5
30     y=x/0
31     print(y)
32
33 except ZeroDivisionError:
34     print("ZeroDivisionError found")
35
36 #TypeError
37 try:
38     x=5
39     s="Hello"
40     print(x+s)
41
42 except TypeError:
43     print("TypeValue Error")
44
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

PS C:\Users\bhhc1\Desktop\2nd Year Labs\323103310032\python\week1> python exception.py

ValueError Found
Index Error
NameError handled
ZeroDivisionError found
TypeValue Error

PS C:\Users\bhhc1\Desktop\2nd Year Labs\323103310032\python\week1> []

```
exception.py 1 expEntry.py expAge.py
python > Week1 > expAge.py > ...
1 class InvalidAge(Exception):
2     pass
3     age = int(input("Enter your age(Years): "))
4 if age<0:
5     raise InvalidAge("Invalid Age")
6 elif age < 18:
7     raise InvalidAge("You are not eligible to Vote")
8 else:
9     print("You are eligible to Vote")
10
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

PS C:\Users\bhhc1\Desktop\2nd Year Labs\323103310032\python\week1> python expAge.py

Enter your age(Years): 19
You are eligible to Vote

PS C:\Users\bhhc1\Desktop\2nd Year Labs\323103310032\python\week1> []

```
exception.py expEntry.py expAge.py
```

```
python > Week1 > expEntry.py > ...
1  class Course(Exception):
2      pass
3  compu = ['CSE','CSM','CSD','IT']
4  roll = int(input("Enter roll number: "))
5  name = input("Enter your name: ")
6  branch = input("Enter your branch: ")
7  branch=branch.upper()
8  if branch in compu:
9      print("Congratulations", name, ", you are Welcome to the world of computers")
10 else:
11     raise Course("Students from non computers branch are not allowed")
```

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

powershell - week1 + ×

```
PS C:\Users\bhbc1\Desktop\2nd Year Labs\323103310032\python\week1> python expEntry.py
Enter roll number: 32
Enter your name: Charan
Enter your branch: cse
Congratulations Charan , you are Welcome to the world of computers
PS C:\Users\bhbc1\Desktop\2nd Year Labs\323103310032\python\week1>
```

Week2

Modules and Packages:

```
ArthameticModule.py
python > Week2 > ArthameticModule.py > div
1 def func1():
2     print("This is function 1")
3 def func2():
4     print("This is function 2")
5 def add(x,y):
6     print("The sum of",x, "and", y, "is", x+y)
7 def sub(x,y):
8     print("The difference of",x,"and",y,"is", x-y)
9 def multi(x,y):
10    print("The product of", x,"and",y,"is",x*y)
11 def div(x,y):
12    print("The division of", x,"and",y,"is",x/y)

importA.2.py
python > Week2 > importA.2.py
1 from ArthameticModule import func1, func2
2 func1()
3 func2()

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
```

PS C:\Users\bhhc1\Desktop\2nd Year Labs\323103310032\python\week2> python importA.2.py
This is function 1
This is function 2

```
ArthameticModule.py
python > Week2 > ArthameticModule.py > div
1 def func1():
2     print("This is function 1")
3 def func2():
4     print("This is function 2")
5 def add(x,y):
6     print("The sum of",x, "and", y, "is", x+y)
7 def sub(x,y):
8     print("The difference of",x,"and",y,"is", x-y)
9 def multi(x,y):
10    print("The product of", x,"and",y,"is",x*y)
11 def div(x,y):
12    print("The division of", x,"and",y,"is",x/y)

importA.py
python > Week2 > importA.py > ...
1 import ArthameticModule as m
2 a=int(input("Enter the first number: "))
3 b=int(input("Enter the second number: "))
4 m.add(a,b)
5 m.sub(a,b)
6 m.multi(a,b)
7 m.div(a,b)

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
```

PS C:\Users\bhhc1\Desktop\2nd Year Labs\323103310032\python\week2> python importA.py
Enter the first number: 4
Enter the second number: 8
The sum of 4 and 8 is 12
The difference of 4 and 8 is -4
The product of 4 and 8 is 32
The division of 4 and 8 is 0.5

```

engg.py
python > Week2 > Packages > engg.py > display_projects
1 def stuDetails():
2
3     roll = int(input("Enter your roll number: "))
4     name = input("Enter your name: ")
5     year = int(input("Enter your year of study: "))
6
7     if year == 1:
8         print(f"Welcome, {name}!")
9
10    elif year == 2:
11        print(f"Keep up the good work, {name}!")
12    elif year == 3:
13        print(f"Stay focused, {name}.")
14
15    elif year == 4:
16        print(f"Good luck with your placements, {name}!")
17    else:
18        print("Invalid year.")
19
20 project_list = []
21 def add_project():
22     project = input("Enter the project name: ")
23     project_list.append(project)
24     print("Project successfully added.")
25
26 def display_projects():
27     print("The projects are: ", project_list)
28

```



```

medicines.py
python > Week2 > Packages > medicines.py > display_medicines
1 def medicineDetails():
2     medicine_name = input("Enter the medicine name: ")
3     quantity = int(input("Enter the quantity available: "))
4     expiry_year = int(input("Enter the expiry year: "))
5
6     if expiry_year < 2024:
7         print("Warning: This medicine is expired or close to expiry!")
8     else:
9         print("Medicine details are successfully added")
10
11 def display_medicines():
12     medicine = input("Enter the medicine name: ")
13     available_medicines = ["Crocin", "Paracetamol", "Dolo", "Aspirin", "Ibuprofen"]
14
15     if medicine not in available_medicines:
16         print("This medicine is not available in this pharmacy.")
17     else:
18         print("The available medicines are: ", available_medicines)
19

```

EXPLORER

- 323103310032
- python
 - > Week0(Replit)
 - > Week1
 - > Week2
 - Packages
 - > __pycache__
 - engg.py
 - medicines.py
 - ArthematicModule.py
 - importA.py
 - importB.py

importB.py

```

from Packages import engg, medicines
print("Medicines Details:")
medicines.medicineDetails()
print("Medicine Display:")
medicines.display_medicines()
print("\nEngineering Details:")
print("Student Details:")
engg.stuDetails()
print("Project Details:")
engg.add_project()
print("Project Display:")
engg.display_projects()

```

TERMINAL

```

PS C:\Users\bhvc1\Desktop\2nd Year Labs\323103310032\python\week2> python importB.py
medicines Details:
Enter the medicine name: Metformin
Enter the quantity available: 100
Enter the expiry year: 2026
Medicine details are successfully added
Medicine Display:
Enter the medicine name: Dolo
The medicine is available

Engineering Details:
Student Details:
Enter your roll number: 32
Enter your name: Charan
Enter your year of study: 2
Keep up the good work, Charan!
Project Details:
Enter the project name: Facial_recognition
Project successfully added.
Project Display:
The projects are: ['Facial_recognition']

```