Navya Battu

Class Id : 8

ICP Id : 14

Objective : The following assignment focus on to make one familiar with python basic topics.

Features :

1. Using Regular Expressions
2. Iterative loops
3. Conditional/Decision making loops
4. Used List and Set functions
5. Operators
6. Python Inbuilt functions

Configurations :

Python 3.6, PyCharm (COMMUNITY 2017.3)

Implementation and Deployment :

Question 1 :

Input :

Case 1 : navya

Case 2 : Navya@123

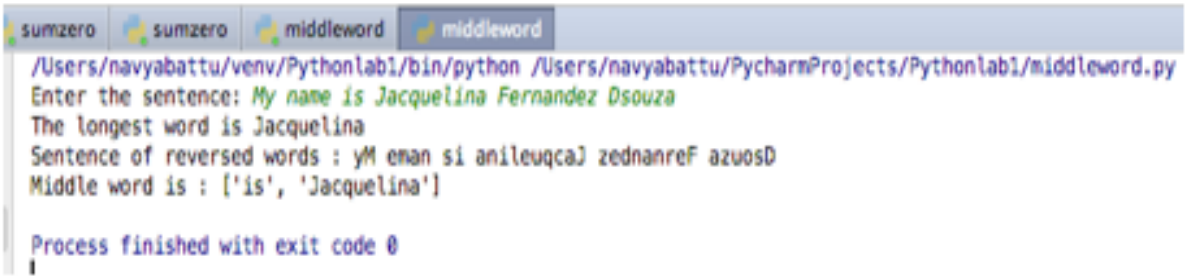
Output:

Question 2 :

Input :

My name is Jacquelina Fernandez Dsouza

Output :



Question 3 :

Input :

[1, 3, 6, 2, -1, 2, 8, -2, 9]

Output :

Question 4:

Input :

```
class_python=['Mounika','Kiran','Praveen','Benson']
class_webapplication=['Kiran','Benson','Rachana','Suhas']
```

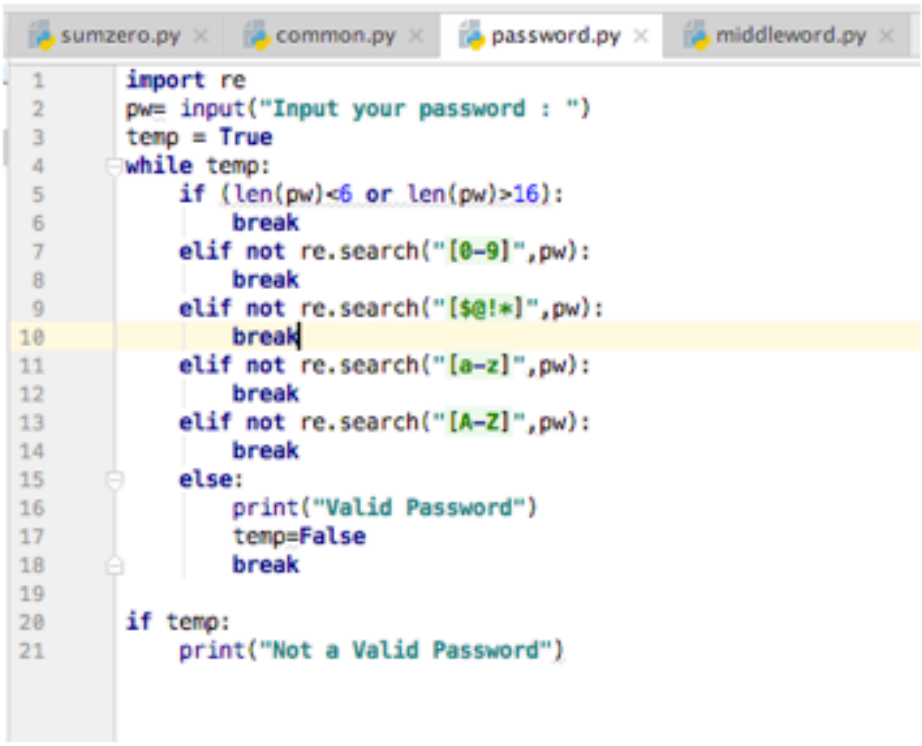
Output :

```
/Users/navyabattu/venv/Pythonlab1/bin/python /Users/navyabattu/PycharmProjects/Pythonlab1/common.py
Common students in both classes
['Benson', 'Kiran']
Unique students in both classes
['Suhas', 'Rachana', 'Mounika', 'Praveen']

Process finished with exit code 0
```

Implementation and Deployement

Explanation for code : Question 1



1. Importing regular expressions
2. Taking password as input from User
3. Initializing the temp variable for "True"
4. Starting the conditional loop while temp is "True"
5. Checking the string to meet required conditions through Decision statement "if elif.."
6. If it did not satisfy one of the any conditions break executes and loop will end and output is given as "Not a Valid Password"
7. If it satisfies all the conditions output will be "Valid Password" and temp variable will be set to "False", loop will end

Explanation for code : Question 3

sumzero.py | test.py | common.py | password.py | middleword.py

```
1   str_list = [int(x) for x in input("Enter in a list: ").split()]
2   s = sorted(str_list)
3   zeroset = set()
4   for k in range(len(s)):
5       mark = -s[k]
6       i, j = k + 1, len(s) - 1
7       while i < j:
8           sum_two = s[i] + s[j]
9           if sum_two < mark:
10              i += 1
11          elif sum_two > mark:
12              j -= 1
13          else:
14              zeroset.add((s[k], s[i], s[j]))
15              i += 1
16              j -= 1
17  print(zeroset)
```

1. Taking list of numbers from user through input() and stored them in list
2. Sorting the list
3. Initialize a set "zeroset"
4. Starting a loop with a range of length of sorted list
5. A conditional loop inside "for" loop for checking the conditions and adding the output numbers to set "zeroset"
6. Printing the output

Explanation for code : Question 4

sumzero.py | test.py | common.py | password.py | middleword.py

```
1  class_python=['Mounika','Kiran','Praveen','Benson']
2  class_webapplication=['Kiran','Benson','Rachana','Suhas']
3  common=list(set(class_python).intersection(set(class_webapplication)))
4  print('Common students in both classes')
5  print(common)
6  total=list(set(class_python).union(set(class_webapplication)))
7  unique=list(set(total).difference(set(common)))
8  print('Unique students in both classes')
9  print(unique)
```

1. Storing the list of string values in list class_python
2. Storing the list of string values in list class_webapplication
3. Storing the common string values with the help of intersection function in set.
4. Print common students
5. Storing the total string values from both lists using union function
6. Removing the common values we got previously from total

7. Printing the unique students

Limitations :

1. Version compatibility
2. Needed too many loops

References :

https://www.tutorialspoint.com/python/index.htm

https://www.geeksforgeeks.org/

https://stackoverflow.com