PYHTON LEARNING SHECDULE FOR BEGINNERS

DAY1 :

Title:- Anaconda navigator, Keywords, variables ,Identifiers.

Task:- Ask questions on keywords,variables and identifiers.

DAY2:

Title:- Operators, Data types, print types, Indexing

Task:- Ask questions on Indexing,data types and operators.

DAY3:

Title:- List: (Add, remove, delete, insert....etc)

Task:-Adding,removeing and inserting etc..

1.Write a Python program to find common items from two lists.

2. Write a Python program to extend a list without append.
Sample data: [10, 20, 30]
[40, 50, 60]
Expected output : [40, 50, 60, 10, 20, 30]

3. Write a Python program to remove consecutive duplicates of a given list.
Original list:
[0, 0, 1, 2, 3, 4, 4, 5, 6, 6, 6, 7, 8, 9, 4, 4]
After removing consecutive duplicates:
[0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 4]

Day4:

Title:- Tuple

Task:-Adding values in tuple,

1. Write a Python program to convert a given list of tuples to a list of lists
   Original list of tuples: [(1, 2), (2, 3), (3, 4)]
   Convert the said list of tuples to a list of lists: [[1, 2], [2, 3], [3, 4]]
   Original list of tuples: [(1, 2), (2, 3, 5), (3, 4), (2, 3, 4, 2)]
   Convert the said list of tuples to a list of lists: [[1, 2], [2, 3, 5], [3, 4], [2, 3, 4, 2]].
2. Write a Python program to sort a tuple by its float element.
   Sample data: [('item1', '12.20'), ('item2', '15.10'), ('item3', '24.5')]
   Expected Output: [('item3', '24.5'), ('item2', '15.10'), ('item1', '12.20')]

DAY5:

Title:- Sets, Frozen sets,Dictionaries

Task:-

1. Write a Python program to find maximum and the minimum value in a set.
2. Write a Python program to find the elements in a given set that are not in another set.

3. Write a Python script to add a key to a dictionary.

4. Sample Dictionary : {0: 10, 1: 20}
   Expected Result : {0: 10, 1: 20, 2: 30}

5. Write a Python program to create a dictionary from a string.
   Note: Track the count of the letters from the string.
   Sample string : 'w3resource'
   Expected output: {'w': 1, '3': 1, 'r': 2, 'e': 2, 's': 1, 'o': 1, 'u': 1, 'c': 1}

DAY6:

Title:- Comprehensions: (list,Dict,set..)

Task:-

1. Write a Python program to insert a given string at the beginning of all items in a list. Go to the editor
   Sample list : [1,2,3,4], string : emp
   Expected output : ['emp1', 'emp2', 'emp3', 'emp4']

2. Given a Python list, find value 20 in the list, and if it is present, replace it with 200. Only update the first occurrence of a value

Given

```
list1 = [5, 10, 15, 20, 25, 50, 20]
```

Expected output:

```
list1 = [5, 10, 15, 200, 25, 50, 20]
```

DAY7:

Title:- Conditional Statements: (if, else, elif and nested if...)

Task:-

1. Given a list, iterate it, and display numbers divisible by five, and if you find a number greater than 150, stop the loop iteration.

```
list1 = [12, 15, 32, 42, 55, 75, 122, 132, 150, 180, 200]
```

Expected output:

```
15
55
75
150
```

2. Write a Python program to find those numbers which are divisible by 7 and multiple of 5.

3.Given an integer n , perform the following conditional actions:

- If n is odd, print Weird

- If n is even and in the inclusive range of 2 to 5, print Not Weird

- If n is even and in the inclusive range of 6 to 20 , print Weird

- If n is even and greater than 20 , print Not Weird

DAY8:

Title:- **Looping, packing and unpacking concepts:(**For, While...**)**

Task:-

1. The provided code stub reads and integer,n , from STDIN. For all non-negative integers i<n ,

print i**2 .

Example

The list of non-negative integers that are less than n=5 is n=[0,1,2,3,4] . Print the square of

each number on a separate line.

0
1
4
9

2   Print first 10 numbers using a for loop

3. Print sum of all even numbers from 10 to 20
4. Check how many times a given number can be divided by 3 before it is less than or equal to 10. By using while input is 200.

DAY9,10:

Title:- Functional Programming: (Introduction, Def, Recursion, Pure function..**)**

Task:-

1. Generates Fibonacci numbers through recursion.
2. Write a Python function that takes a number as a parameter and check the number is prime or not.
3. Write a Python program to print the even numbers from a given list. [Go to the editor](#)
    Sample List : [1, 2, 3, 4, 5, 6, 7, 8, 9]
    Expected Result : [2, 4, 6, 8]
4. Write a Python function to create and print a list where the values are square of numbers between 1 and 30 (both included).
5. Write a Python function that checks whether a passed string is palindrome or not.

DAY11:

Title:- **Lambda Functions:(**Introduction, Map, Filter**)**

Task:-

1. Write a python program to generate a lambda function that able to add a number of 20. Input 10
2. Write a python program to generate a function to double a specified number.
    Sample input 22,o/p:44

Day12:

Title:- Classes and objects.

Task:-

1. Create a Vehicle class with max_speed and mileage instance attributes

2. Write a Python class to reverse a string word by word. Go to the editor
   Input string : 'hello .py'
   Expected Output : '.py hello'

DAY13:

Title:- Inheritance and Types

Tasks:-

1. Create a child class Bus that will inherit all of the variables and methods of the Vehicle class.

2. Try to create a class that inherits from two super classes (multiple inheritance)
3. Define property that should have the same value for every class instance
   Define a class attribute"color" with a default value white. I.e., Every Vehicle should be white.

Expected Output:

Color: White, Vehicle name: School Volvo, Speed: 160, Mileage: 20

Color: White, Vehicle name: Audi Q5, Speed: 260, Mileage: 16

DAY14:

Title:- Polymorphism

Task:-

1. Create two classes: Cat and Dog, and present them with their respective sounds. Make instances to call the classes using the method.
2. Create two classes: rose and lilly, and present them with their respective colors. Make instances to call the classes using the method.

DAY15:

Title:- Encapsulation.

Task:-

1.Write any two programs using encapsulation concept.

DAY16:

Title:- Data Abstraction

Task:-

1.Write any two programs using data abstraction concept

INTERMEDIATE

DAY17:

Title:- Git hub, Tasks on generic python.

Task:-

1. **Write a program in Python to check if a number is prime.**
2. **Write a program in Python to check if a sequence is a Palindrome.**
3. **Write a program in Python to produce Star triangle.**
4. **Write a program in Python to add strings,int,folats in existing variable.**

5.**Write a function called fizz_buzz that takes a number.**

conditions

1. If the number is divisible by 3, it should return "Fizz".
2. If it is divisible by 5, it should return "Buzz".
3. If it is divisible by both 3 and 5, it should return "FizzBuzz".
4. Otherwise, it should return the same number.

DAY18:

Title:- Tasks on functional Programming

Task:-

1. Write a function for checking the speed of drivers. This function should have one parameter: speed.
   I.   If speed is less than 70, it should print "Ok".
   II.   Otherwise, for every 5km above the speed limit (70), it should give the driver one demerit point and print the total number of demerit points. For example, if the speed is 80, it should print: "Points: 2".
   III. If the driver gets more than 12 points, the function should print: "License suspended"

2. Write a function that returns the sum of multiples of 3 and 5 between 0 and **limit** (parameter). For example, if limit is 20, it should return the sum of 3, 5, 6, 9, 10, 12, 15, 18, 20.
3. Write a function called **show_stars(rows).** If **rows** is 5, it should print the following:
   I.   *
   II.   **
   III. ***
   IV. ****
   V.   *****

4. Write a Python Program for Sum of squares of first n natural numbers.

5. Python Program for Find sum of odd factors of a number.

DAY19:

Title:- Tasks on oops.

Task:-

1.Gives the tasks on oops concept.

DAY20-24:

Title:- Python packages like pandas, numpy, matplotlib, seaborn.

Task:-

1.Browseing on internet give the some tasks include all packages.

DAY25:

Title:- File handling and exception handling.

Revised the all topics ask some question and submit the performance of student.

DAY26-28:

Title:- Database(sql)

Task:Gives a tasks include CRUD operations.

DAY29-31

Title:-Learn streamlitpackage, and do Streamlit project(with backend)

DAY32:

Title:-Python mini Project:

Title:- Data structures (understanding).

Note: By the end of course completion there should be a document on total given tasks and submitted to the project manager.