Type of doubt	Timestamp	Describe your doubt here in detail.	Screenshot	Solution
Coding related	Week 2 task 4. , timestamp 17:47	Last line of products_list toh ni ana pura code ma ni hn	https://drive.google.com/open?id=1Bz00NuZKxYjDt12Opl84oJXNxnDwFlNF	Instead of product_list it should be prod_value.
Career related		Hi Nitish Sir I followed your roadmap video which you had uploaded earlier this year I had studied Statistics, Python with Numpy and Pandas and Matplotlib, studied SQL in depth and solved almost all SQL queries on Hackerrank few months back. But I got lazy in doing EDA projects and I am stuck there since then I joined this course to continue my learning and I think I have some understanding of things that you are gonna teach for the next 45-60 days And I know that honestly things at the end of the course won't be as smooth as we think because doing projects will take time, we will lack clarity on some concepts and interview preparation will consume a lot of time and my WFH would have ended by then and I will get less time. And I think that lots of students will do the course seriously but those last 30-40 days will make the difference So I am being selfish here as I want to get ahead of the crowd, I want to utilize this period to get basic understanding of ML concepts with the Math behind it. So can you recommend me 1 or max. 2 books(more creates confusion and I end up reading nothing) that will do the job. Supplement materials like video lectures or notes is also appreciated Thanks a lot for reading this		Hands on machine learning is the best. You can also follow ISLR

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Conceptual		Hello Sir, I have read many articles and watched many videos of Data scientists. Almost Everyone is Saying that to understand the Machin Learning concept you have to study Maths for it. So My question is, from where I can study Maths?And How to Study? And What topics should study? Tell the resources please. Resources can be anything Youtube, Books, Webpages etc. Thank You		We will be teaching maths for data science in the upcoming modules in detail. Don't worry
Coding related		left side sir's code and another side my code i return exact same like sir's code but my output different from sir's output? why? my jupyter notebook not count set data type	https://drive.google.com/open?id=1xCsYKBsjwYOVB_CG8GxJEBetF-Mq0kEu	And you have another doubt. Here is the screenshot link. Your code is right. Try to rerun the code. If the output will not change, reply to this email with screenshots
Conceptual	1:23:39	What will happen to the tuple at the first memory location Will the garbage collector destroy it?	https://drive.google.com/open?id=1W3Wys1T40-38BSX3DZYAHtQn0X_6-bYB	In line number 4, you are creating a new tuple and reassigning that tuple to the same variable. When you did the reassigning, that time there is no reference to the old tuple in memory. So Python will treat that old tuple as Garbage. Python periodically removes that garbage from memory. So it can happen that when you are performing the reassigning to the same variable, Python will not delete the old tuple at that time but Python can do it after some time.
Coding related		int' object has no attribute 'balance' .	https://drive.google.com/open?id=1gX7pYCeELv4Nw57hhHYaY-dOjTcvMnd8, https://drive.google.com/open?id=12BY0tblkDYsKuEtHeNh9Inegle9aKLHX	When you are calling the Deposit() method, you are passing 1000 as an argument. It is collected as a variable name other inside the class method. So the value of other for that instance is 2000 which is an integer. Inside the method, you have written this code: >> self.balance = self.balance + other.balance As other = 2000, then what does 2000.balance mean? Does integer have any such property? No, right. That's why you have got the error.

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Coding related		my code same as sir code but show error in jupyter notebook only. another interpretor its work fine. how i resolve this problem. please While sending the mail mention my doubt in it.	https://drive.google.com/open?id=1ptgCZR-UG-1bRrWMh2RLts5en10j3TFN	We have analyzed the code that you had send as a screen short. Sometimes some error codes are executed without our intention which can change the default behavior sometimes. But you have the right code, no error is there. That's why you will not get any errors with a fresh run.
Conceptual		Why do we need to put self.attribute_name inside constructor rather than just simply attribute_name while initializing?		Inside the constructor of a class, you wrote that specific codes which are specifically related to every instance you will create. Let's say you have created a class that will take a car's name, car color, and total km drove. These given inputs are only accepted by the instructor. So every person in the world who has a car is an instance of this class. Now, Person1's car is different from Person2's car. In your class, you made a method named daily_uses() which can help how much a car is driven on daily basis. So inside this method, you need every person's total km drove parameter value. But the problem is that this value is only available to the constructor. But you need to the method. So that the value is passed throughout the class to use when there is a requirement, the self (which is itself represented as an instance of the class) is needed for the attribute. If you don't use the self while assigning the attribute, you can't use that value in another area of the class.

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Conceptual		1. L=[1,2,3] print(type(L)) output: <class 'list'> L.upper() Error: 'list' object has no attribute upper You told that every datatypes in python are classes like list, tuples, int, etc. And jab bhi koi inn datatypes ka variable banata hai toh they are called an object. My question is upar mein toh 'L' ka type print kiya hai which is an object according to the theory but why it's showing class 'list'? Aur niche mein error hai 'list' object... Is it because L.upper() mein 'L' variable ne ek method ko access karna chaha, isiliye usko 'list' object bolagaya ho? 2. class Temp: def __init__(self): print('hello') obj = Temp() Why not??		1. __main__() is not a magic method. It is used for different purposes. Like you have one function in one Python file. Also inside this file, there are other codes you have written. And you have another python file where you want to only use the 1st file's function. Not the other stuff. But if you try to execute that function from file 2, then with the function, other codes will be executed. To prevent this, __main__() is used. You will learn in detail later on. 2. We did not get your point. Are you trying to use a method of the class by not passing the self? self is passed to the methods which are only callable by the object. Class can't execute or call that method. To call those methods we need an object. But if you want that a particular method can be called by the class, then there is a method called @classmethod. Then this method can't be used by the object. Also, there is a concept about the @static method where either class or object doesn't need to call the method. Then you make those methods as the @static method. 3. Yes the memory allocation type is the same as the list or any other built-in methods/class/data types as well as user-defined functions. 4. No, you can't see the private methods/variables by waiting a little bit. But still, you can see the private property of the class. After putting a dot (.) like obj. and then putting an underscore (_) like obj._, you see the private properties and methods. And there is another concept called protection. It has more strong power that can the developers that it is protected. But still you can use the method. 5. Yeah you can create a class by not creating a constructor. In class, you might memorize that the constructor is usually used to configure something that you don't want to control by the objects. So if your code does not have any such requirements, then no need to put a constructor. If you do not define a constructor, then Python will not create a constructor for that. Only the developers can control this. 6. Before you have learned the functions in Python, you are doing Procedural Programming. While you have learned functional programming and you are learning OOP. You can get this as an example. And the

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Conceptual	During solving the rectangle class task problem	I have created variable in constructer as area, parameter and methods area() and perimeter(). When executing it gave "Int object is not callable". Why python does not understand area and perimeter are variable and area(), perimeter() are methods. I changed function name and it worked after that.	https://drive.google.com/open?id=1_0ONPDKtXfaqdQOz6ABMf4myEmN_8zw2	you can't have two things simultaneously with the same name, be it a function, an integer, or any other object in Python. Just use a different name.

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Conceptual		1. Is __main__() also a magic module? if so, what is its superpower? 2. Why do we have the golden rule of OOP? Why don't we want the option of one member of the class calling another member directly (without using the object)? 3. How are objects stored in memory? When we pass object, we pass its memory address (since arguments are only passed by reference in Python), how is that done? Like for list, address of first element is passed, but in user-defined classes also o we have contiguous memory allocation? 4. A class can have public and private variables and methods, so when we create an object say, obj of a class and write obj. and wait for the list of class members to show up, can we see the private members as well? 5. What if we don't explicitly define the constructor method? Does Python internally always create a constructor method? 6. I started reading on functional vs Procedural vs Object-oriented programming paradigm. Could you please explain this through an example? It would really help in cementing the importance of OOP. In Curriculum we have Functional Programming as a topic and then OOP as the next topic, were we supposed to have a session on Functional Programming as well? 7. What could be the disadvantages of OOP, if any? Would we prefer procedural or function over OOP approach anywhere?		1. __main__() is not a magic method. It is used for different purposes. Like you have one function in one Python file. Also inside this file, there are other codes you have written. And you have another python file where you want to only use the 1st file's function. Not the other stuff. But if you try to execute that function from file 2, then with the function, other codes will be executed. To prevent this, __main__() is used. You will learn in detail later on. 2. We did not get your point. Are you trying to use a method of the class by not passing the self? self is passed to the methods which are only callable by the object. Class can't execute or call that method. To call those methods we need an object. But if you want that a particular method can be called by the class, then there is a method called @classmethod. Then this method can't be used by the object. Also, there is a concept about the @static method where either class or object doesn't need to call the method. Then you make those methods as the @static method. 3. Yes the memory allocation type is the same as the list or any other built-in methods/class/data types as well as user-defined functions. 4. No, you can't see the private methods/variables by waiting a little bit. But still, you can see the private property of the class. After putting a dot (.) like obj. and then putting an underscore (_) like obj._, you see the private properties and methods. And there is another concept called protection. It has more strong power that can the developers that it is protected. But still you can use the method. 5. Yeah you can create a class by not creating a constructor. In class, you might memorize that the constructor is usually used to configure something that you don't want to control by the objects. So if your code does not have any such requirements, then no need to put a constructor. If you do not define a constructor, then Python will not create a constructor for that. Only the developers can control this. 6. Before you have learned the functions in Python, you are doing Procedural Programming. While you have

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Coding related		the error says the computation object has no attribute 'factorial' when I write this code -
		
		class Computation:
		  def __init__(self):
		
		  def factorial(self,n):
		  self.fact = 1
		  for i in range(1,n+1):
		  self.fact = self.fact*i
		  return self.fact
		
		fact = Computation()
		fact.factorial()
				By analyzing your code we can see that the factorial method is inside the constructor. So as per your code definition, the factorial method is not a path of the class, it is part of the constructor. So change the indentation and you are good to go.

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Coding related	I have small doubt in task 7 question 4.	if I am entering 1 in play_again after entering 0 then the loop is not ending. What i am doing wrong here?
		below is my code.
		
		'
		import random
		class FlashCard:
		  def __init__(self):
		  print('welcome to fruit quiz')
		  self.fruits = {'Avocado':'green','Kiwi':'brown','watermelon':'green','orange':'orange','Grapes':'green','Mangoes':'yellow','Apple':'red','Strawberries':'pink','Banana':'yellow'}
		  self.guess()
		
		  def guess(self):
		  while True:
		  fruit,color = random.choice(list(self.fruits.items()))
		  guess_color = input('What is the color of {}\n'.format(fruit))
		
		  if guess_color.lower() == color:
		  print('Correct answer')
		  else:
		  print('Incorrect answer')
		
		  play_again = int(input('Enter 0, if you want to play again:'))
		  if play_again == 0:
		  self.guess()
		  else:
		  break
		'
			https://drive.google.com/open?id=1FEPfgjWzKiPb6uHEIYgQoEX8AbTI2yPe	I understood your doubts. I will suggest you to run it on python tutor to get the exact idea of how your program flows.
				What happens is when FlashCard() is called and through constructor self.guess()1 is called, and you enter quiz answers for the first time and then "Enter 0 to play again" comes there you enter '0' to play again. Here is the main catch in programm you check for 0 "play_again==0" and as it satisfies execution enter in if part call self.guess()2, what this does is it start the function again and you enter fruits color and then enter "1" when asked for play again. As you enter '1' after condition check, it goes in the else part and loop breaks. This one breaks the loop for the second called function self.guess()2 and this function is over. But self.guess()1 is still not over as, it executed if part so while loop didn't break, due to that you see a quiz again and you answer and then you enter '1' to no play again it will execute the else part where loops of self.guess()1 break and function end and quiz stops. Instead of just calling, give a return keyword or break after self.guess() calling. This will solve this issue.
				if play_again == 0:
				  return self.guess()
				
				or
				if play_again == 0:
				  self.guess()
				  break
				I hope you got your doubts cleared. Do run this on Python tutor to see how execution flows.

Career related		What blogs, related to python, data science, machine learning etc. can beginners write? Please suggest some ideas.		Yes, you can write blogs. You can write any kind of blog at any time. There is no restriction.

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Conceptual	.	Instance variable store the different values of different object at same time. my question is , how its possible that different values can be store at same location at same time. why these values not overlapped ? Can you plz explain the internal working of instance variable. How it manage different values at memory level?		The instance variables are special types of variables. But the different values and methods are not stored in the same location. It is not possible. Even the instance object is stored in a memory location. Then the methods and the class variable values are stored in different but separate locations. You can imagine it like a list. The list is stored in a memory location. But the list elements are not stored in the same location. The elements are stored in different locations. And the memory location of lists simply points to the elements' memory location. Kind of the same thing also happens with instance variables.
Conceptual		After creating gender attribute outside of class why does it not suggest this attribute after dot?	https://drive.google.com/open?id=1mlXq7JaA-bagbDMloZFrpUYDT1FlWqlO	Colab Issue, reload the notebook.
Coding related	17.08	In the task 4 question no 7, you have used product_list which hasnt been used before. Please explain how		Instead of product_list it should be prod_value.
Conceptual	1:18:18	if I am creating two variables p1 and p2 oof our class Person, and both are different objects saved at different location. p1 = Person('Nitish") p2 = Person("Age") now if I want to see how many object of my class Person is created and I need all the instance variable in the form of list. can I do that? is it possible to store the data from each object and keep it saved or update in our class?		Yes, it is possible. You can make a list of all objects created using static variables like counter was used in atm class. Make object_list as a static variable and in the constructor append the object in that list.

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Coding related		I don't understand what we have do in question 2 of session 8		Notebook updated. Kindly check it now. And you need to make Two class 1- Card it has 2 attributes 2- Deck : it is a class of collection of all possible cards in a deck. It has a method deal(), which takes out one card from the deck. and method shuffle()- it rearranges deck of cards randomly.
Coding related		Not able to understand the first two questions in session 9's task	https://drive.google.com/open?id=1zjd08FQRrwoCyk8Acj4jQ22P3xzMlEFZ	We can't tell you the solution. Wait for the solution video. But for now, try to create two class Vehicle and Bus, and try to inherit those class.
Conceptual		Can we have more than 1 parent class in a child Class? Like I want a class to be linked with more than 1 class. is it possible>		Yes, it is possible to have multiple parent/base class of a child class. This is called Multiple Inheritance. E.g., Class Base1: Body of the classClass Base2: Body of the classClass Derived(Base1, Base2): Body of the class
Conceptual		Question regarding Garbage Collection let's say we have a list L = ['A','B','C'] then we create another list L L = ['A','X','Y'] in this case, will the entire list ['A','B','C'] will become garbage or only the elements 'B' and 'C'?		For the case of garbage collection, you already know that the list has a separate location address and the elements also have different addresses. According to your example, the address or the first list will be deleted. And the "B" and "C" elements will be deleted as garbage values. "A" will stay there.