Lecture – 5B
Some Suggestions on Programming

So, I hope all of you are comfortable with writing code now. No, not yet, not fully. So there were few errors I saw in the lab.

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So, 1 leaf tells you few things which is probably obvious, but not so obvious how do children learn language they learn quite quickly know language, how do they learn things no another guess.
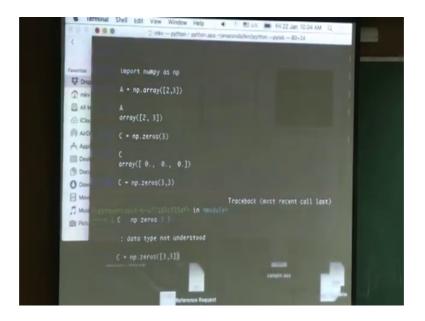
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Imitation, so you just see a child they just imitates, so you should imitate good programs, and you just quickly try to in vibe, they are really very sharp children and the sharpness keeps going down over age. So, thing is to look at good code, well look at my codes well they are not bad. So, look at those codes and just look at it carefully.

So, few errors which I saw people were doing is so, n p numpy is a package, is a module, so import is do not import numpy star from num like you do not import just a give it a

name either you keep it as numpy; import numpy, or import numpy as n p that is the usual that is the standard name in fact.
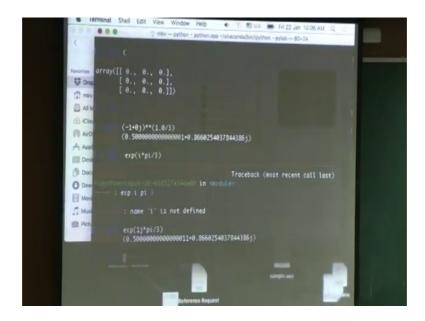
So, when you write a function of a numpy, then you have to say n p dot, so you know which function are you working with. It is a good idea because there will be lots of functions, you will be doing something with liner algebra, you will be doing something with math library so, you should be, that is a good idea to just do things like.

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So, you should always use import in your files import numpy as n p, just make it as a standard stuff and then anything I need n p dot array, a equal to n p dot array, and it is a function of n p. So, I can write 2 comma 3 ok, so a will give you this, so this is a good practice and you should always adopt good practice do not write a code like a junk you should write clean nice codes, suppose I want 0's then it is a part of numpy. So, n p dot array sorry 0's; 0, is a function I was making a mistake yesterday. So, if I say 3 then of course, it will make a 1 d array, I guess c will give you this, but I want 3 by 3 array, then it should be it takes only single argument. So, I cannot write 3 comma 3 that is not correct, but I can put this in list, so it takes a list; list, now list is 1, this object is a single object. So, it is happy that I will take single object you do not give me 2. So, it will work now c will be.

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So, it requires bit of thinking, but you have to again know what is the function how many arguments are being passed, what can I pass you need to think about it. Some people are asking about complex numbers, so I want a cube root of minus 1, so minus 1 if I just say minus 1 cube root it is not going to give me complex, so just put a 0 j. So, now, it is a complex number, then this guy know this is complex number, and then if I say star pietab takes it, but if you writing inside a function then you need input. It again depends on the implementation, some implementation may not like may not, I mean it will be part of standard python, but it is best to import it because it should be, few things that your program should run on all platforms you understand, so it runs on windows machine, but not in Linux machine.

So, it is the best idea to keep a standard import sima then you can do all this, but then you can run everywhere. So, is it correct hardware check is exponential I pi by 3 you know so, you do I pi is minus 1. So, if I do one-third is I pi by 3, so exponential I star pi by 3. So, it should be 0 1 j knows so, I is not going to take, so 1 j - 1 j is a it is a stimuli so, you say no, so, you can work with this. You can solve that cubic equation problem like this so, we know with complex number you have to put that 0 j or 1 j or that 1.

So, programming is easy, but you have to be disciplined patient, and then it will work, but write good code and people can write codes, but you have to write decent codes.