LISTS PART 4: SLICING

See this is also an English terminology you are cutting the slice of it we say right in English something like that from this whole list slice of bread can say from whole bread pack you take some slices of bread something like that you assume this your whole bread packet a list are separate a packet you want few slices of the bread something like that you assume so this is the terminology we call as slicing. So slicing let us see how can that be done so that general syntax how you can slice a list is as follows list name and within the square brackets you have to give start till end plus one please note this syntax especially this end plus one so whatever the number you give same like your range function it will count one less the end point will be counted one less so if you say from role number one to three i want, you should say one to four so that it counts the third person something like that so this is how you should do slicing operations as i said i want one numbers one to four let me say for that what should i say? Students starting position is one here we have to give the index please not that start index this is the sorry here should i be giving the i did again starting index to end index so see this is start index and end index this is computers perspective you should give the numbers in the computers perspective here to manage the human and computers perspective differences i have inserted this dummy value at the zeroth index this is one way by which you can manage or its better i that recommended you guys used to the computers perspective and code it in this way only and upcoming exercises will also be in that way only we will make you familiar with the computers perspective don't worry if you don't feel the comfortable at this stage, definitely you will get comfortable as you keep practicing. The key thing here is practice just keep practicing you will find everything is easy for you. Fine ok so i want the role numbers from one to four right? So how would i do that? From one to four is what i wanted and please note here it is end index plus one because same like your range function this functionality the slicing functionality also would count one less than the specified end point so you want to count till four then you should specify it as five see let us see, see this is written one two three four akanksha arun harish lakshmi this is extracted so we have extract of the slice and please note that it is not necessary that you have to give both these indices the start and end that is optional if i say students and if i just give colon what happens? See entire thing is taken so what does this mean? The default value they have some default values it means if you haven't specified something what should the computer do? That has also been defined in python. For the default value for the start is the actual starting index that is zero the default end value is the total length minus one see because there are seven elements in the list so it will be zero one two three four five six so seven minus one, length minus one is the default end value zero is the default start value, if you dint give anything if this is also one way by which you can extract out the entire list. This is slightly roundabout but this would actually give you the entire list this is yet another by which you can get the entire list and if you just give the starting value and you let end value as such what happens, let us see, see i am giving the third person and i left the end value blank what happens? See from index three the third person Harish till the end it has taken so whenever you don't give a value it will look up to the default value and use it so here you haven't given end so it took the default end

value of the length minus one and it has taken so basically in English this translates to start from the third person and go till end this is English translation of this slicing statement. Ok what if you don't give the start value? Simple it will take the same default value zero let us see that too ok am not giving the start value i will say up to five so up to index five it has to stop that means the four persons it will take see it has taken from the beginning, it has stopped before the index five see zero one two three four at lakshmi it has stopped see the end value is always when it reach five it will skip it, it will not consider five so till four it has considered. So i guess you understand the slicing mechanism that is to extract out the subset of a list we use this slicing the start value and the end value, end value please note that you have to give one extra because same like your range function it would stop counting when it reaches this particular given end value, given end value here is five so when it reach index five so it stop counting, it had quit it had counted only up to four so you have to make sure that you give the indices such that extract out the parts that you need. Any if you don't give start value the default start value is zero if you don't give end value default end value is, i am sorry i had said that has length minus one it is length see because we are giving one access right? Till length minus one you wanted to move means you have to give length as the answer. The default end value is let me write it as commands here default start sorry that is a start index is zero and the default end index is nothing but the length of the list i will highlight this statement default start index is zero the default end index is the length of the list these values will be taken only when the user has not specified the value that is see here start is specified, end is not specified so in that case this start value will be taken and since end is not specified it will look up to the default end value and take that value here end is specified start is not specified so it will take up the default start value only when you don't give any value it will take the default value, if you have given some value it will take the values you have given ok. so let us see one more thing students of two to five so it has taken indices two three and four it has just printed that so when you have given the values it will take the values that you gave if you haven't given the values it will take the default values that is what the concept of default values. If you have some experience of c programming something like that you have something called default lock switch case default locks have you heard something you can relate to it, it is very similar to that even if you have haven't heard please don't worry, the concept is if the user has provided something that has to be taken, if nothing is provided take this particular standard value default can be transferred into standard value, so these are the standard values that has been defined this will be taken. Alright i hope you have seen the difference operation in list these are not only operation that can be done list, there are a lot of them you can refer to the documentation online, i would recommended you guys please try with different kinds of list, different things with numbers names with the floating point values for that you can take the stats calculation for example because if it is fourteen percent tax then when you multiply by zero point one four you will get some decimal values the floating values we call that in computer science you can get that as well so i would like you guys try different data type list with this we cal as data type that is the data is of type integer or a floating value is nothing but the decimal point is there so real numbers something like that you, it's a string or a word something like that you try a different type of data's, different type of list, different type of operation and only by practice you can realise that lists

are really flexible and they come handy keep practising thanks for watching the video happy learning.