(CART Captioner standing by)
(Indiscernible voice/s)
>>INSTRUCTOR: This one. It's going to be interpreted zero X. You are specifying the language. In this case, we can see the number is seven and the number in (word?) is seven. (Indiscernible). For example, you want to indicate the five permissions it goes something like this. How to specify that. (Indiscernible). You can interpret the number 754 . (Indiscernible). The word that this is interpreted 10.0 , 2.8 . This one (Indiscernible). (Indiscernible). When you write 1.4 , E-2, you are taking this number E -2 (?). You are moving the decimal point several positions. -3.2 . Multiply this by 10. Something like this two plus one.
(Client following along to PDFs)
This allows you the expressions. It is important this is not complicated. It's just a computation . It's important to remember the basic elements are this . You're going to compare something to something else . (Indiscernible). The expression is two. If it is not the case the expression is (Indiscernible).
Here is something different which is this. Mrs. to convert. What is on the left if you convert it going to (Indiscernible). This Expression (Indiscernible).
For example, if you start on the left, equal to if you start on the right. The value of this expression is (Indiscernible). This is very important. If you start putting this together will become (Indiscernible). Not in the sense of being difficult. This is an expression . (Indiscernible). This has been assigned to the value of this expression which is four. This expression is false. What the hell is happening here with this part ? (Indiscernible). I am looking at the type of (Word?). What is the value of this? What is the type of (Word?)? It's the same. You are comparing this. Is this the same as that ? No. So the value of this one thing is four (?).
How about this one? This is three HZ. What the hell is this? Comparison is using (Indiscernible). This one (Indiscernible). The value of this expression is two.
Okay. You have seen this boolean operator. If you don't like it that's fine. This is saying operation X or Y as (Indiscernible). (Indiscernible).
Remember, true or false. At the end of the day, it's a Boolean expression. (Indiscernible). How do you explain what this one is?
This expression (Indiscernible). In this case, two variables, X and Y. And here , what you are going to write down is zero is this. Four? False. You don't like 00. You can't say X is false and Y is false. Disagreeing with our usual language. If you put them together they want to express (Indiscernible). What about this one? False and true. If one of them is true, the whole thing is true. What about true, false? True. What about (Indiscernible).
So, I hope you can do the same thing for X and Y. This will be true if both X and Y are true. (Indiscernible).
These two tables they are equivalent to this in this kind of value. This is exactly the same as that right there. So how do I explain this table? Blah blah blah blah. This is the distinction

from that. I am just flipping this backwards because I think it's easier. Starting from two things. Okay.
Here you have (Indiscernible). What happened here? The right-hand side is what?
>>STUDENT: True.
>>INSTRUCTOR: Goats true. The value is true. The value of this line is false. If you are not used to this, you should go over these exercises line by line.
No matter if they are Boolean operators, it's always important to understand there is something for the present on the operators. You have a bunch of operators and you need to know which one must be related first.
We change the (Indiscernible). I want to change that. You have something like (Pause) , let's say X or Y and Z , O, Q . What would you (Indiscernible). The same place here.
(Indiscernible).
>>STUDENT: Because you want to do this first? Why?
>>STUDENT: X. Because (Indiscernible).
>>STUDENT: It will be Y and G first .
>>INSTRUCTOR: He is saying it should be Y and Z. First. Any other takers?
>>STUDENT: (Indiscernible).
>>INSTRUCTOR: No . Okay. In order to (Indiscernible) you need to know what is the presence of the operators being used. In this case a Boolean operator . This is important. You should know this. What is the number you should use? (Indiscernible).
(Indiscernible). This is saying (Indiscernible). After that , O . You can apply this. This is in order but (Indiscernible) doesn't like that order. He likes to do it left to right. Expression . I emphasize that.
you have some difficulties putting it together. I think this is a nice exercise. (Indiscernible). Something called object-oriented code . In order to manipulate objects, we need to have something that assigns value . Two (Indiscernible). In the values are going to be Boolean. Value and objects the point is that any object has a value.
From that Boolean point of view, you have to test the value of the number. You have (Indiscernible) and it is Boolean. You have to indicate why you would like to know the value of this object in terms of the Boolean value of that object. The Boolean value is (Indiscernible). Here's the answer is four, two , and two . And they are potentially (Indiscernible). You want to know the value of an object. You want to know the value of that object is true.
Let me summarize. (Indiscernible). You want to know the value true . (Indiscernible) Is false. To know the value of an object, (Indiscernible).
You ask why DHEC we something like this. Sometimes you have functions you have written ritten and those functions don't mean anything. Now we are going to move into o a different category integers. (Indiscernible). Now we are going to start looking at the connection. Connections are sets or numbers or lists of (Indiscernible). So connections (Indiscernible). (Pause) . Training. (Indiscernible). Any type of data you can think of. And the other thing this will specify the power of this language comes from the fact that you can manipulate this (Indiscernible). You can compose this. You have to be very careful about

what we are calling objects in this connection.
Concatenate . Concatenate . Just as the value you should focus on. This has to develop from the bottom or the top .
Strings and lists they are sequences. A set of students. There is no order. However , we assign an index , one, two Koepka 3, four, five, six, seven , now I'm assigning and ordering to the set. When you have an index, what are your values? You have data and you have an index . (Pause). (Indiscernible). You have an assigned number. The student (Indiscernible). The student 210 . Coming and if you don't have the ordering , then to find order you have to (Indiscernible) to find what you're looking for. This is important in terms of (Indiscernible) and values.
This is really important in the last two decades. (Indiscernible). It is something interesting and useful. The connection . (Indiscernible). The way to think about that is connections (Indiscernible). This is the power of this representation of data in (Indiscernible). It's not really does . It's not really sets . (Indiscernible). (Indiscernible). The key is the grade you have been the class. The grades for you guys in the class (Indiscernible). Your name is?
>>STUDENT: (Name?).
>>INSTRUCTOR: Your name is (Name?). What grade you have in the class now?
>>STUDENT: (Away from mic).
>>INSTRUCTOR: (Name?) Does not know what grade she has. You. What is your name? Amy. What is your grade in the class now?
>>STUDENT: (Away from mic).
>>INSTRUCTOR:?. You? Your grade? (Indiscernible). Okay. (Indiscernible). (Indiscernible). (Indiscernible). One column A. What I'm stressing here is this is not a list per se. Not a set per se . I'm stressing this is not a (Indiscernible). Name and grade together as a collection of keyvalue data . (Indiscernible). I want to know the grade. (Indiscernible). I just want to go so the keyvalue. The dictionary you have to specify the value of the key and you get the answer I am looking for. This is a way to summarize (Indiscernible). (Indiscernible). Relational databases.
Can anyone tell me what is the conventional database? (Pause). Hmm.I'm waiting. (Pause) . (Silence)
>>INSTRUCTOR: Grade. Age. Weight . Height . I think that will be enough. picture there is the picture of a (Word?).). One, two, three, four, five hearts . This role represents the letter relations . (Indiscernible). What is your name? Joshua? So, name over there, Joshua. What is in this column ? (Indiscernible).
>>STUDENT: (Indiscernible).
>>INSTRUCTOR: Grade. Joshua , second column is A. Third column? (Indiscernible). Next. Weight . Some number. Height . Are we done?
>>STUDENT: Yeah. We are done.
>>INSTRUCTOR: Okay. (Indiscernible). I want (Indiscernible). What is the information ? (Indiscernible). Here, Joshua (Indiscernible). Weight. Height. (Indiscernible). This column. (Indiscernible). The question I ask is what is the relationship between us this and this . Give me an example of a dictionary (Indiscernible) that can be extracted from that data .

(Pause). (Indiscernible) . These attributes (Indiscernible) can be taken to be the keys . (Indiscernible). Name and age could be an association between those two . Can have a dictionary that can associate the name for example. Or you can create another dictionary (Indiscernible).
So, tables . This kind of data representation are the essence of databases. Tables are the essence for what is called (Word?) data.
(Indiscernible). Then we are thinking this whole thing. The one question will be manipulating. The last two decades of a computer size has been more beneficial to explain these tables into a (Indiscernible) keyvalue. This gives us more control searching the data, storing the data , and finding out the relationships of the data that is difficult to be in the table set up .
(Indiscernible). Something from nothing. (Indiscernible). The dictionary . Keys and values. Okay. (Indiscernible).
>>STUDENT: (Indiscernible).
>>INSTRUCTOR: Okay. I guess this course. We are going to learn (Indiscernible). We may do it later. The important thing to understand about (Indiscernible) is an important operation (Indiscernible). The connection. (Indiscernible). There is another one. What is the (Indiscernible) in that connection. And now there is something that has become a major, important implementation issue in the implementation (Indiscernible). (Indiscernible) Is in this set or not. A set does not have an (Word?). (Indiscernible). Is John in this class? Is James in this class? (Indiscernible). (Indiscernible). (Indiscernible). Don't worry. This gentleman now becomes a number . The gentleman becomes a number. (Indiscernible). The gentleman becomes the number. number. How is this done? Number pairing. I'm going to explain to the value.
What do I do? Hash or (Indiscernible). Number is there. It's (Indiscernible). Turns the data into numbers. It's becoming more and more in order for that data.
Questions? What number?
>>STUDENT: (Indiscernible).
>>INSTRUCTOR: (Indiscernible). (Indiscernible). The same hash value that I have in my pocket. This could happen. The number something associated with someone else. (Indiscernible) Have to go and do some correction. A good hash function is one function (Indiscernible). So the correction of numbers get confused. The correction is minimized. For example, all you have to say is (Indiscernible). Okay. These are important things.
So, for example, (Indiscernible). What is this? (Pause). (Indiscernible). (Indiscernible). (Indiscernible). What? (Indiscernible). You have no guesses , right? How about this one? Three is what? A member of A , I guess. This is true. It is important to pass this statement from the inside out so you can interpret what DHEC is happening here.
How about this one? Now it becomes more interesting. And for that , first, what is the list? The (Indiscernible) is the order . Connection of order . Connection of (Indiscernible) . That can be (Indiscernible) . List. Connection . (Indiscernible). (Indiscernible). Access . (Indiscernible). Accessed by index. . (Indiscernible). Different types.
The important thing is as soon as you do this this has an index . This is an index. This is an

index. The index always starts from (Indiscernible). This is the first, second, third. (Indiscernible). (Indiscernible). The second number is this. How do you do that?
A is (Indiscernible). A bracket zero. (Indiscernible). (Indiscernible). (Indiscernible).
If you want to calculate, both of them have to be a string . Okay. So now, it's a very good, operational thing . You have something (Indiscernible). This is a very useful for data. (Indiscernible). Particulars.
You can have a specification (Indiscernible). The brackets indicate I want to have one theory , single theory . (Indiscernible). Spell out what you would like to match . This is going to match the first . The zero (Indiscernible). This one is going to match this one . (Indiscernible). You have this specification. You have this area . (Indiscernible). (Indiscernible).
(Indiscernible). (Indiscernible). Uniform. In order to convert each time you have to tell it A is 1+ 01, blah, blah, blah.
(Indiscernible). (Silence) R