# IIT Madras

ONLINE DEGREE

**Statistics for Data Science - 1**
**Prof. Usha Mohan**
**Department of Management Studies**
**Indian Institute of Technology, Madras**
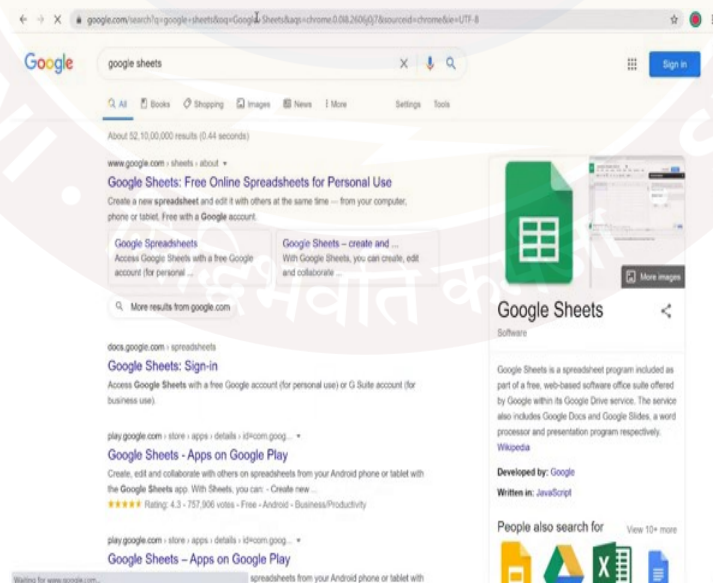
**Lecture – 07**
**Tutorial – 1**

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Hello, Statistics students. In this video, we are going to look at Google sheets, the very basic elements of spreadsheet. You could use a Microsoft Excel as well, but for the purposes of our course we will be doing Google sheets.

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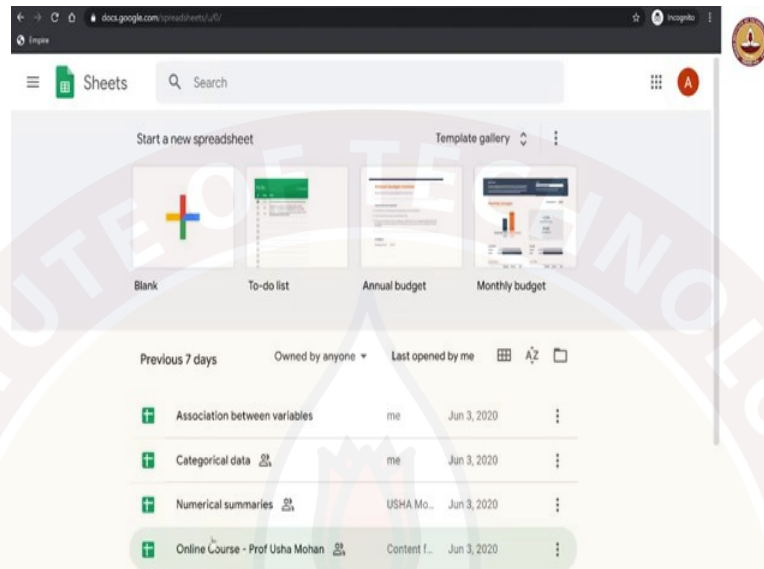


So, let us search for Google sheets. We will go to this, yeah and personal go to Google sheets. Since, I am already logged in, this is the page I get to. And now we want to start a new spreadsheet, we use this and here is our spreadsheet.
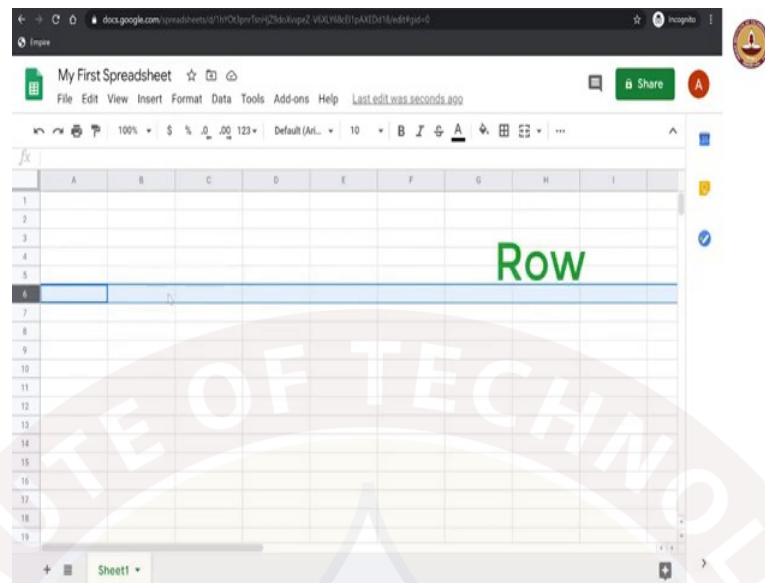
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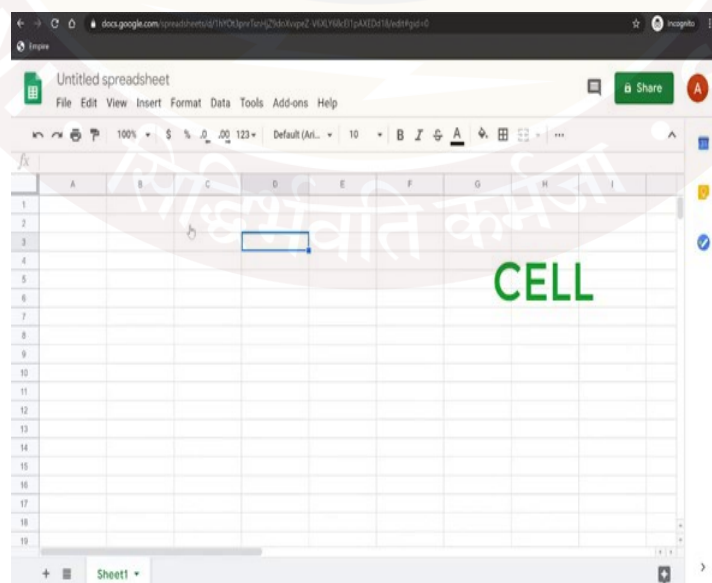
As you can see this spreadsheet has cells, each of these boxes is what is called a cell. And you could navigate through them using the arrow keys, you can go down, down, down or right or left or up. The 4 arrow keys will help you navigate across the spreadsheet.

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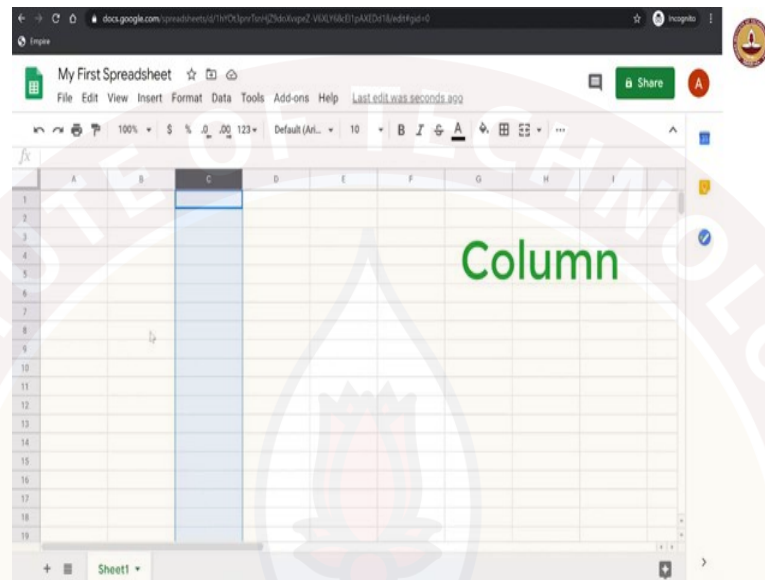


Let us give a name to our spreadsheet and we can name it here. We can go and click here. Let me call this my first spreadsheet. So, we have seen what the cells are, they are these boxes. And now these cells can be seen as a group when they are all in the same vertical region. So, this whole set of cells, the vertical set of cells is called a column. And likewise, all the horizontal set of cells here it is called a row.
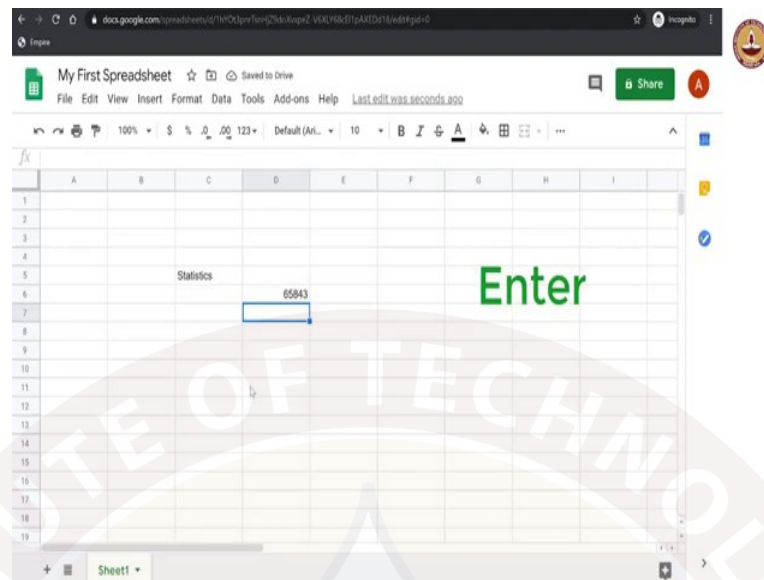
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So, when I choose a particular cell let us say this one, this belongs to the E column and 9 row. So, this cell can be called E 9.

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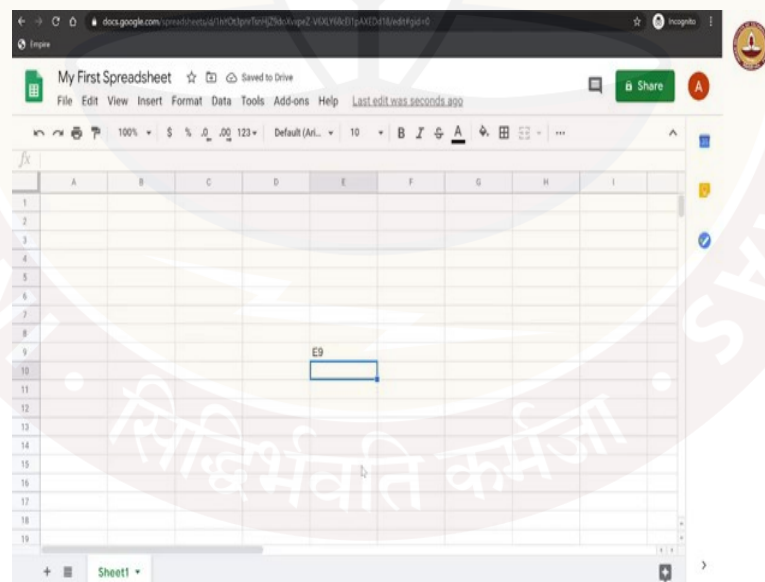


And as you have seen, now I will go I am going to erase this. And as you have seen, you can enter data into these cells. You could enter text.
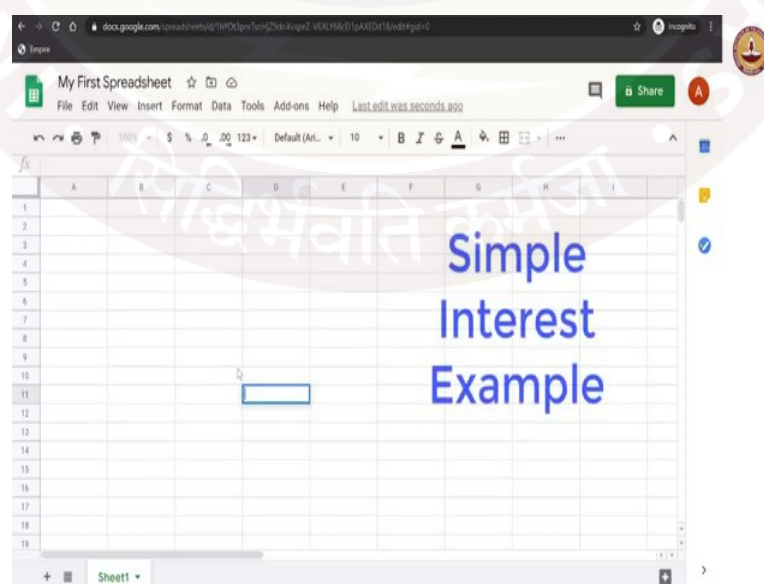
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So, you could enter something like statistics and we press enter and it is there or you could also enter numbers. You could go back to the same cell or you can do it in a different cell and let say I enter a number 65843 enter and now the cell has that particular piece of data.
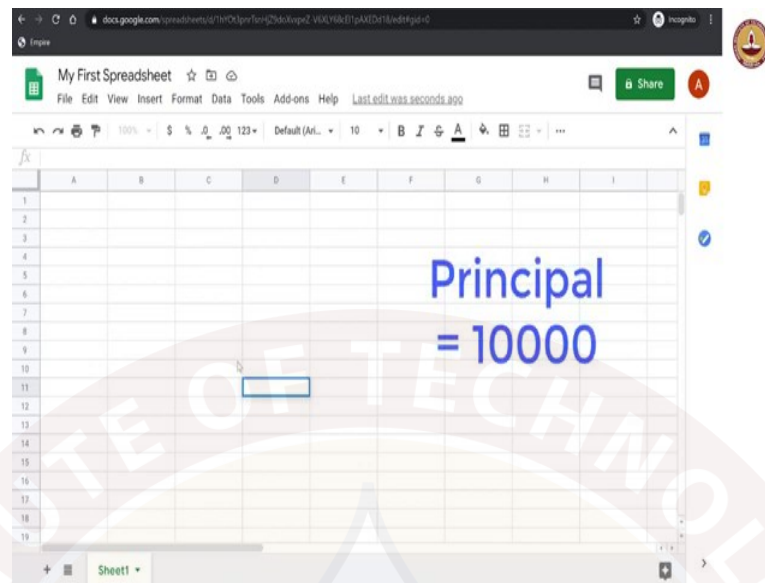
How are spreadsheets useful to us? So, for that let us take a tiny example. Let us first delete these elements. Yeah, spreadsheet is empty now.
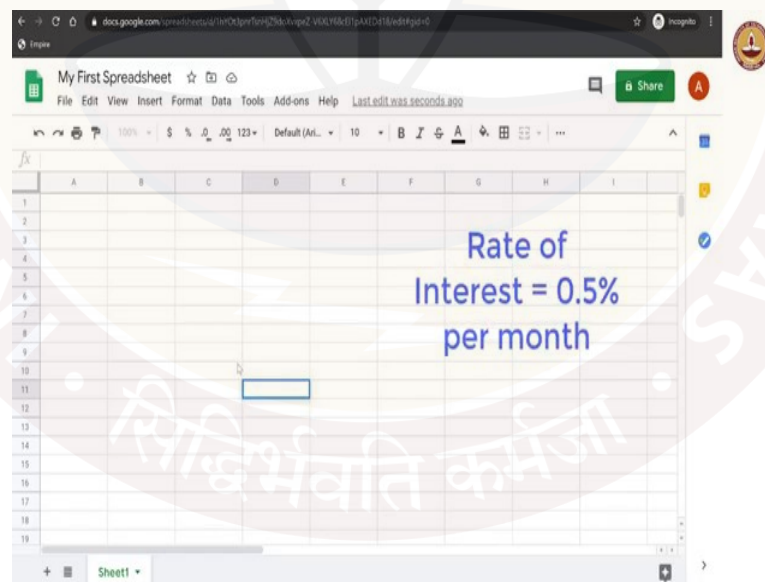
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Let us say we want to make a spreadsheet for calculating simple interest over a loan.

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Let us say you have given a 10000 rupee loan to somebody and there is a monthly interest of 0.5 percent.

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And let say you given it in the month of March.

And what is the interest for the month of March? Nothing; 0 right, because you have just given it. And so, how much is the total interest? Still 0. And then, how much is the total that you are owed? That would be 10000 rupees.

And now this is going to change when we look at the month of April. In April, the person who is taken loan from you will be required to pay an interest of 0.5 percent of 10000 rupees. And how much is that? That is 50 rupees. And that means, the total interest is 50 rupees and the total money you are owed is 10,050, right.

And now let us look at the month of May. Now, again in this month what is the interest that is owed? That is 50 rupees again. And the total interest has now become 50 plus 50, 100. Thus the total money that is owed to you is 10100, ok. I think I mistyped it. It has to be this yes, right.

So, this way you could store the data that you have. And for each month, you can see what is the money owe or how much is the interest that is expected or how much is the total interest that is to be paid to you.

However, you do not need to really input all the data, all the cells by yourselves. The spreadsheet software gives you this very amazing utility called autofill. So, let me tell you what that is.

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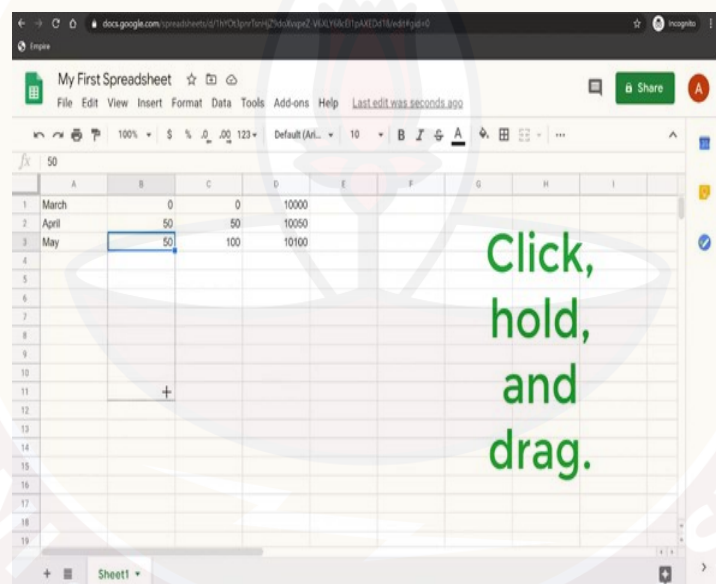


We know that for each month the interest is supposed to be 50 rupees, yes. So, I can take this particular cell and you look at this option here, right, the cursor becomes a cross. I am taking it to the corner, now I click it; hold it and I pull it down. And you see that the spreadsheet software, Google sheets itself directly fills all these cells with the same value, right. So, you do not have to type it.

And what is more interesting is the autofill can also catch patterns. So, you see this pattern, right, this is 0, this is 50, this is 100. So, there is an increment of 50. And let us

select all of these. How do you select multiple cells together? You select them using the shift key.

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So, you go to that top cell, you hold shift down arrow, down arrow. And now, you again grab that corner and you drag it down. And you see that the autofill is filling these cells with the increment of 50 each. So, you could do the same thing with this column as well, shift down, down and then hold and drag, right. Very convenient, is not it.

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And it is quite smart. You do not even need to hold all 3 of these months, you can just take May and then hold and drag and there you go. Your spreadsheet software fills these cells for you because these are all simple patterns that it recognizes, ok.

With that we have just seen the utility of spreadsheets. We will see in more detail in the next video.

Thank you.