

TABLEAU

Day 15

Gantt Chart

**Do you want an easy way for project management?
Gantt chart is there for your rescue!**

A gantt chart is a horizontal bar chart that visually represents a project plan over time. Modern gantt charts also show us the status of who's responsible for each task in the project.

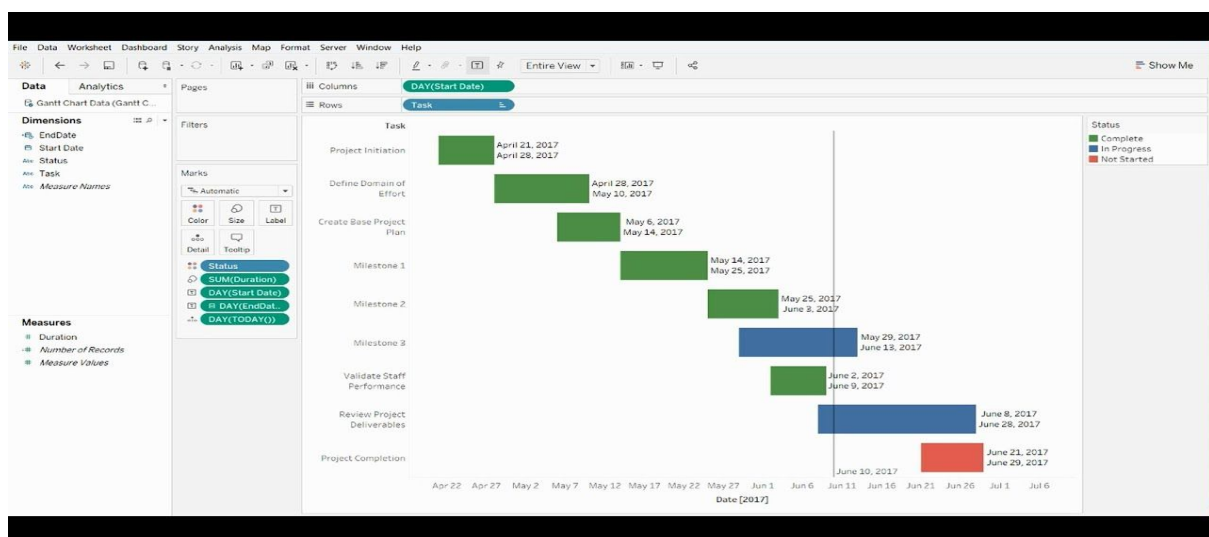
In simple words, a gantt chart is a super-simple way to keep you out of a project pinch!

The chart outlines the tasks to be performed on the vertical axis and time on the horizontal axis. It is used to keep a record of actual and estimated completion dates of tasks in a project plan. The difference between the actual and the planned dates highlights the deviation in the delivery of the assigned task in each project phase.

Fields you shall have in dimensions and measures for creating a gantt chart are:

- **Dimensions:**
 1. Task
 2. Assigned (Name of the person to whom the task is assigned)
 3. Start Date
 4. End Date
 5. Status (Completed, In progress, Not yet started)
- **Measures:**
 1. Duration
 2. Number of records

You can even add some calculated fields.



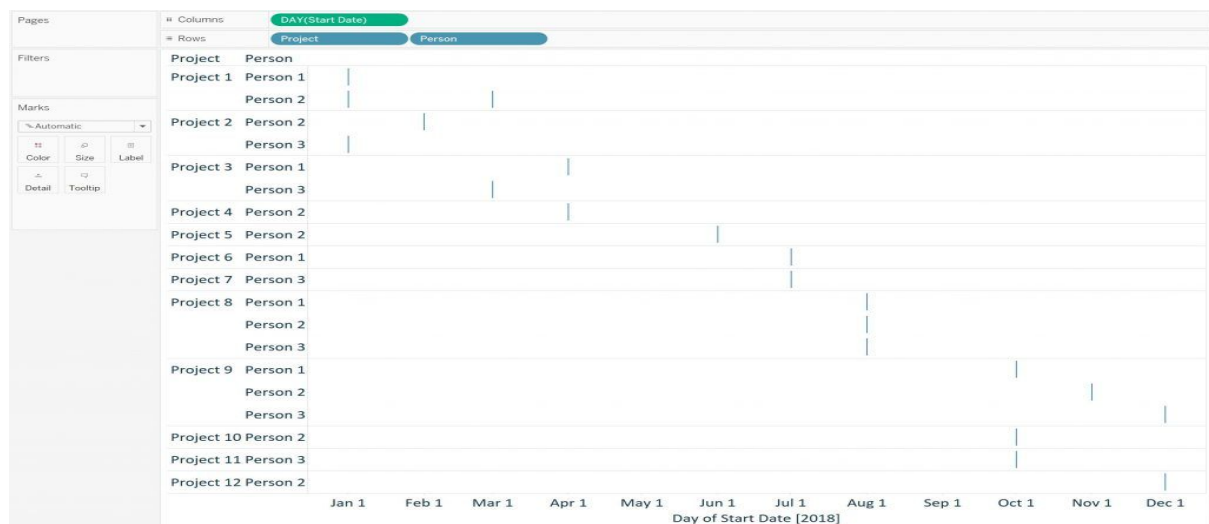
How to create a gantt chart?

This is one of the few examples that cannot be illustrated using the Sample – Superstore data source, so I will be using the following data set:

	A	B	C	D	E
1	Person	Project	Start Date	End Date	Percent Complete
2	Person 1	Project 1	1/1/2018	3/31/2018	1
3	Person 2	Project 1	1/1/2018	1/31/2018	1
4	Person 3	Project 2	1/1/2018	2/28/2018	1
5	Person 2	Project 2	2/1/2018	2/28/2018	1
6	Person 2	Project 1	3/1/2018	3/31/2018	1
7	Person 3	Project 3	3/1/2018	6/30/2018	0.8
8	Person 1	Project 3	4/1/2018	6/30/2018	0.65
9	Person 2	Project 4	4/1/2018	5/31/2018	1
10	Person 2	Project 5	6/1/2018	7/31/2018	0.1
11	Person 1	Project 6	7/1/2018	7/31/2018	0
12	Person 3	Project 7	7/1/2018	7/31/2018	0
13	Person 1	Project 8	8/1/2018	9/30/2018	0
14	Person 2	Project 8	8/1/2018	9/30/2018	0
15	Person 3	Project 8	8/1/2018	9/30/2018	0
16	Person 1	Project 9	10/1/2018	12/31/2018	0
17	Person 2	Project 10	10/1/2018	10/31/2018	0
18	Person 3	Project 11	10/1/2018	11/30/2018	0
19	Person 2	Project 9	11/1/2018	11/30/2018	0
20	Person 3	Project 9	12/1/2018	12/31/2018	0
21	Person 2	Project 12	12/1/2018	12/31/2018	0

Before starting, mark your chart type as a gantt chart.

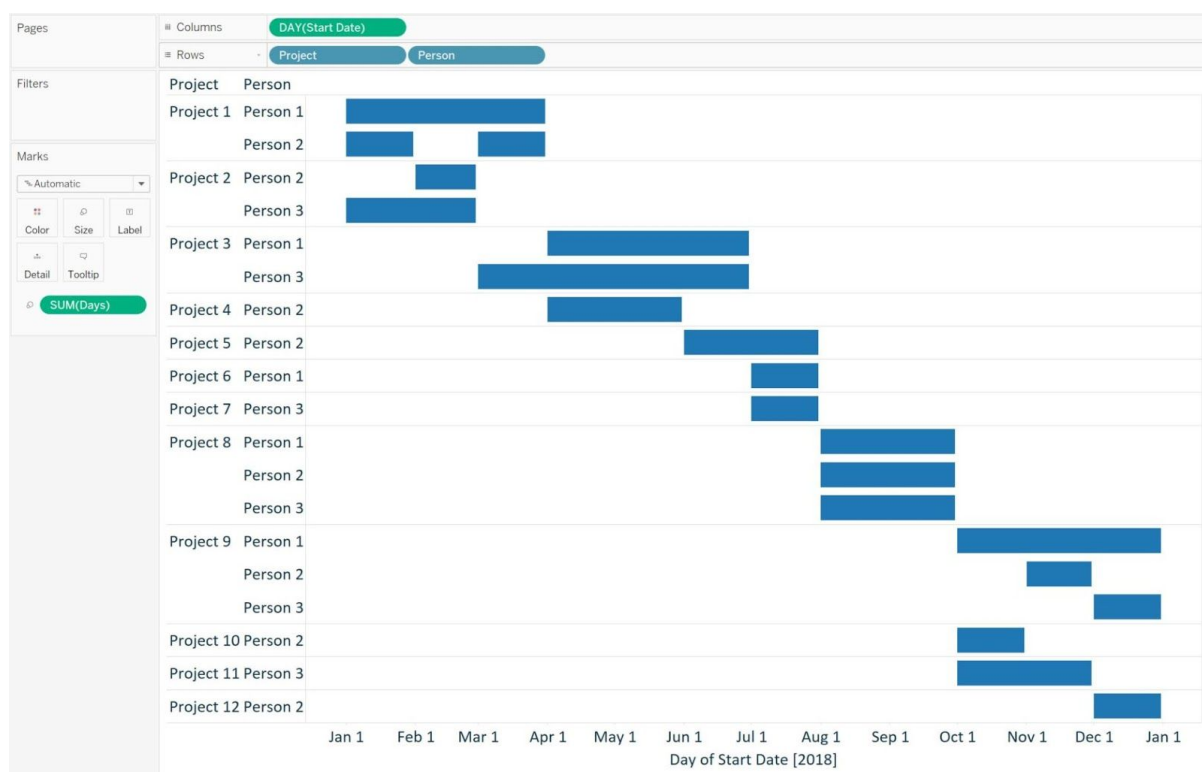
Step 1: For this Gantt chart, I would like to have a continuous axis running left to right, so I will put the Date dimension (being used as a continuous field) on the Columns Shelf.



Step 2: To extend the Gantt bars to illustrate task duration, we need to size each mark by the number of days in each respective project / person combination. We may have a field for duration in some datasets, but it can also be created in Tableau with a calculated field. In this case, duration simply equals [End Date] – [Start Date].



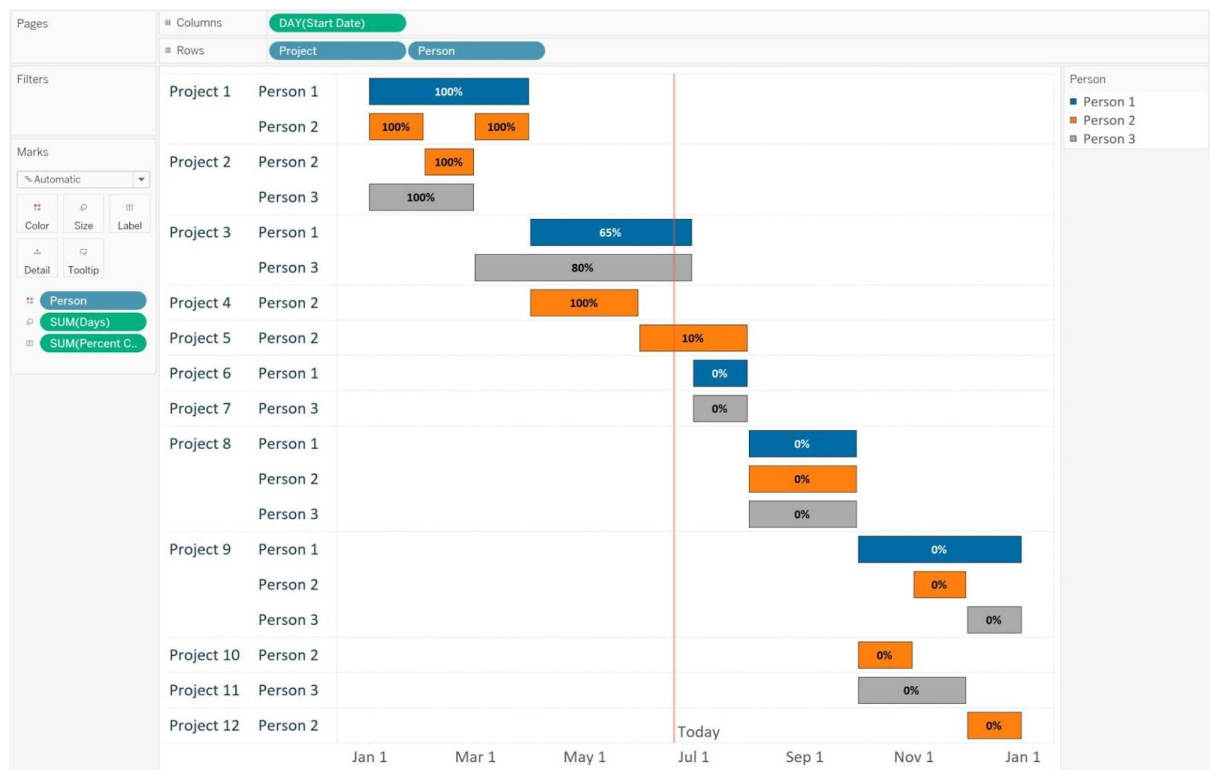
Step 3: We will place the duration on the Size Marks Card so that project/person combinations with longer durations will be longer bars and project/person combinations with shorter durations will be shorter bars.



At this point, we have a usable Gantt chart, but there is still room to add a lot of value in Tableau through formatting, encoding, and reference lines. This step is flexible based on your own requirements. I have done the following:

- Colored the bars by employee by adding the Person dimension to the Color Marks Card. One of my goals was to provide a visual schedule to my team and by doing this, they can quickly view their own schedule and even highlight themselves in Tableau by clicking their name on the color legend.
- Added a reference line for “Today” (pretending it’s June 20, 2018) to show each project in context of today’s date. You can do this by creating a calculated field by using Total() method.
- Added percent complete to the Label Marks Card to help determine if we are ahead or behind pace for each project.

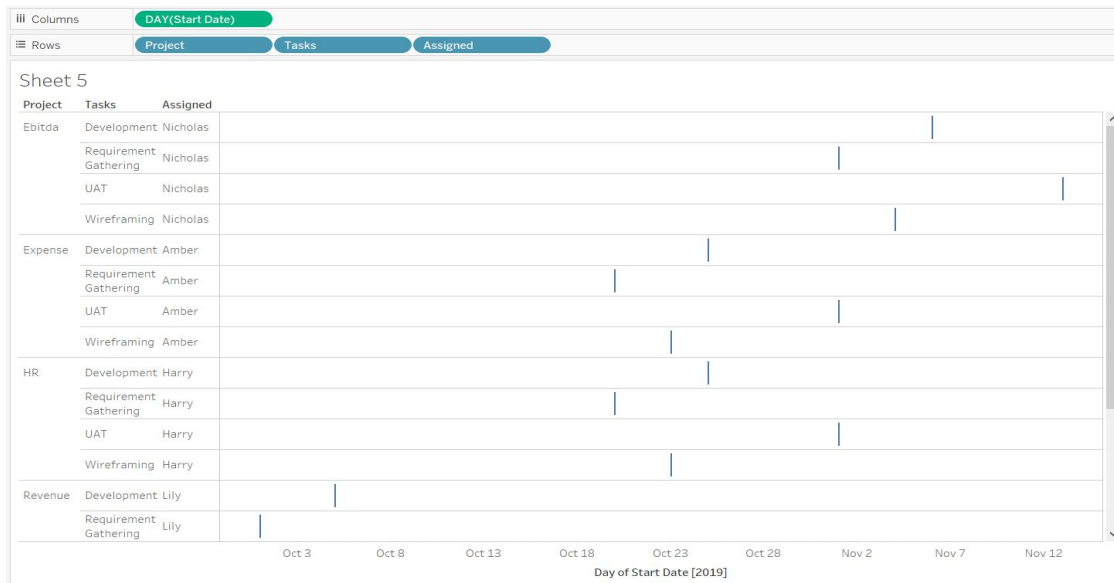
Here is my final Gantt chart :



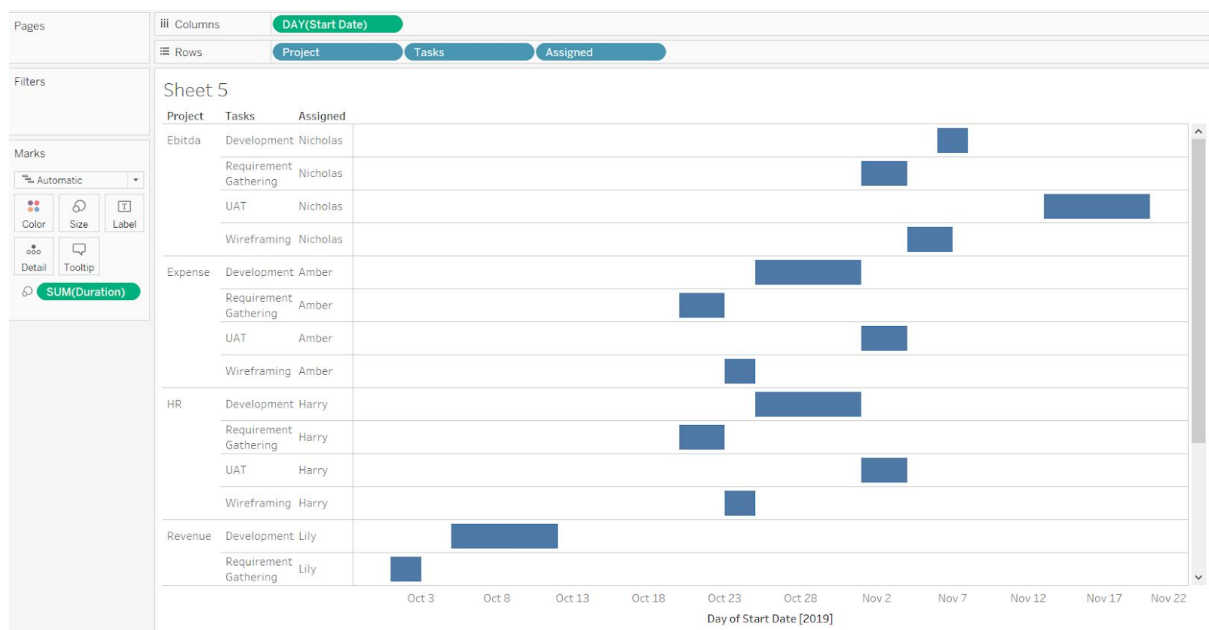
I have one more example of creating a gantt chart using ‘Show Me’ with a different dataset:

Step 1: Change the mark type to gantt chart. Drag the **Start Date** to the Columns shelf and select the date aggregation at the day level.

Step 2: The next step is to drag the dimensions **Project**, **Tasks**, and **Assigned** in the Rows shelf. This provides the information about the project, its tasks, and the individuals assigned to complete them. It also provides the start dates of the various tasks.

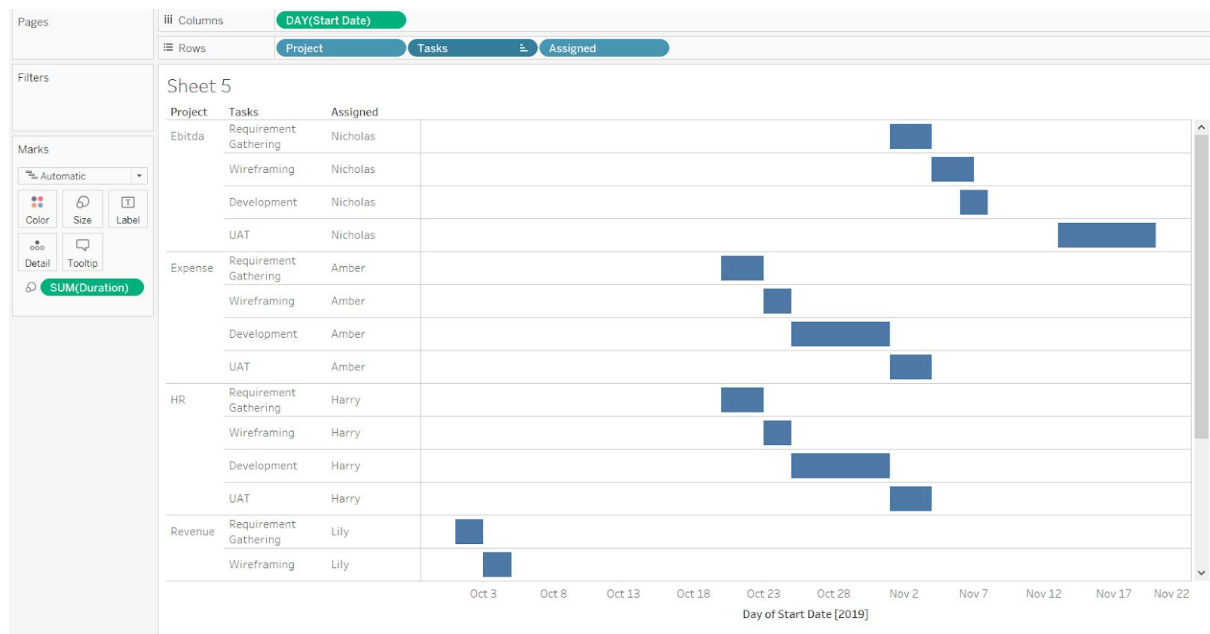


Step 3: Place the **Duration** variable into the Size property of the Marks shelf. The size of the bar will vary in accordance with the time taken or the time it will take to complete that task.

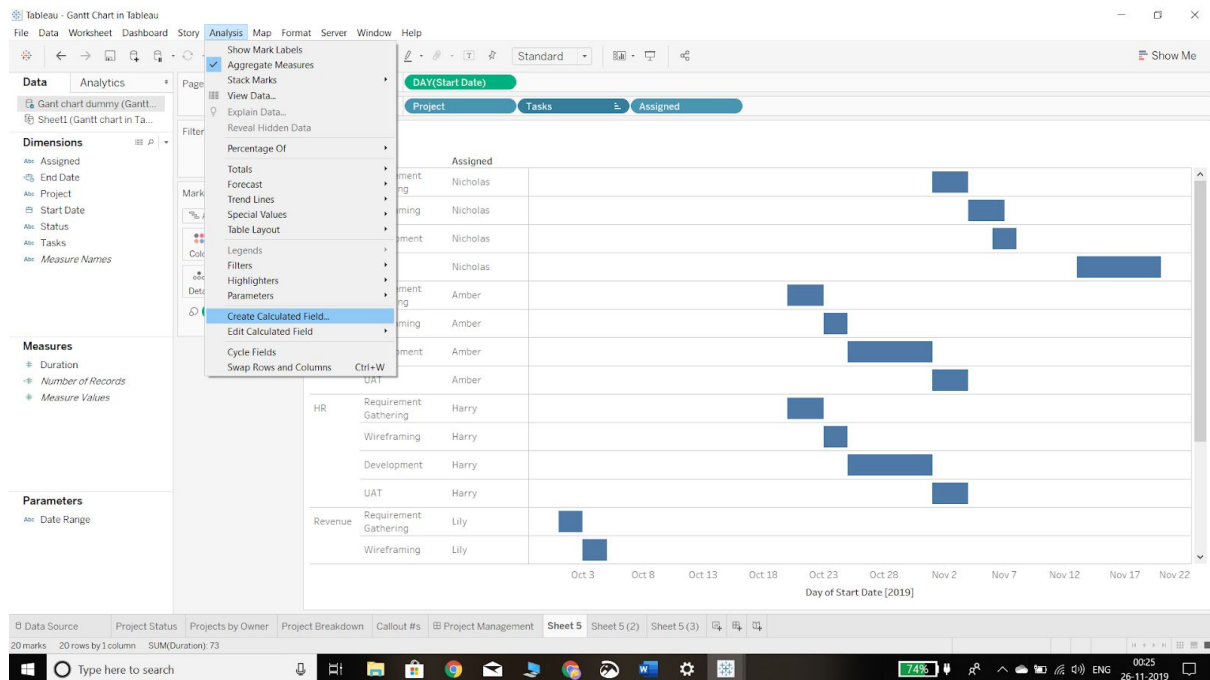


From the above output, we can infer that across projects, the **Development** task seems to be of higher duration, while the **Wireframing** is a shorter duration task.

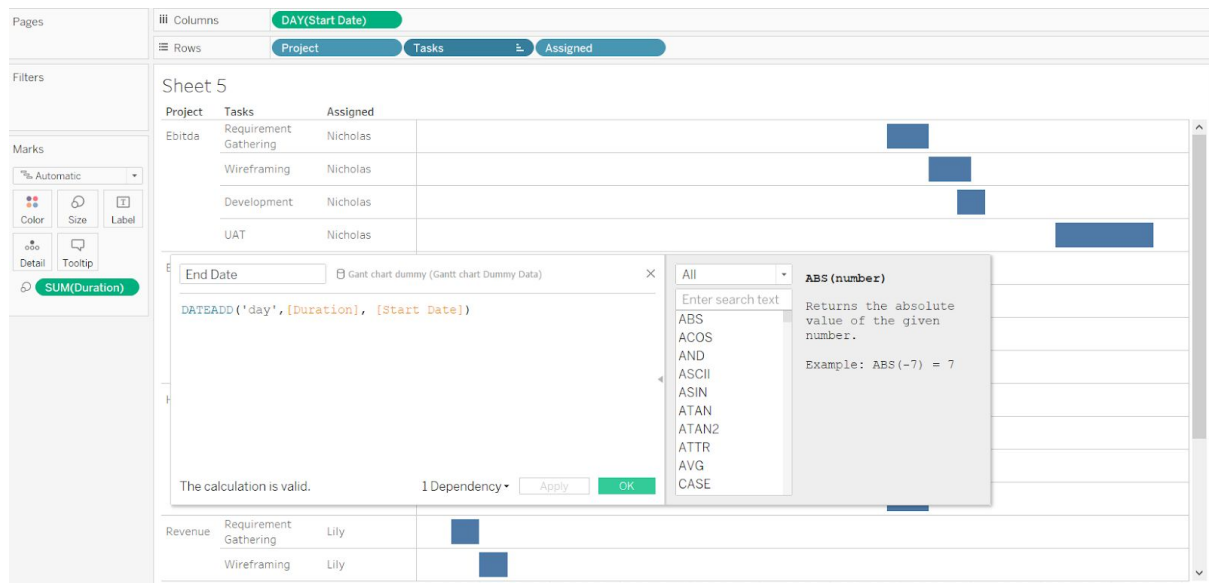
Step 4: We need to sort the task field in the Rows shelf to correct the sequence of the chart. To do this, the first step is to right click on **Tasks** and select Manual sorting from the pop-up display list.



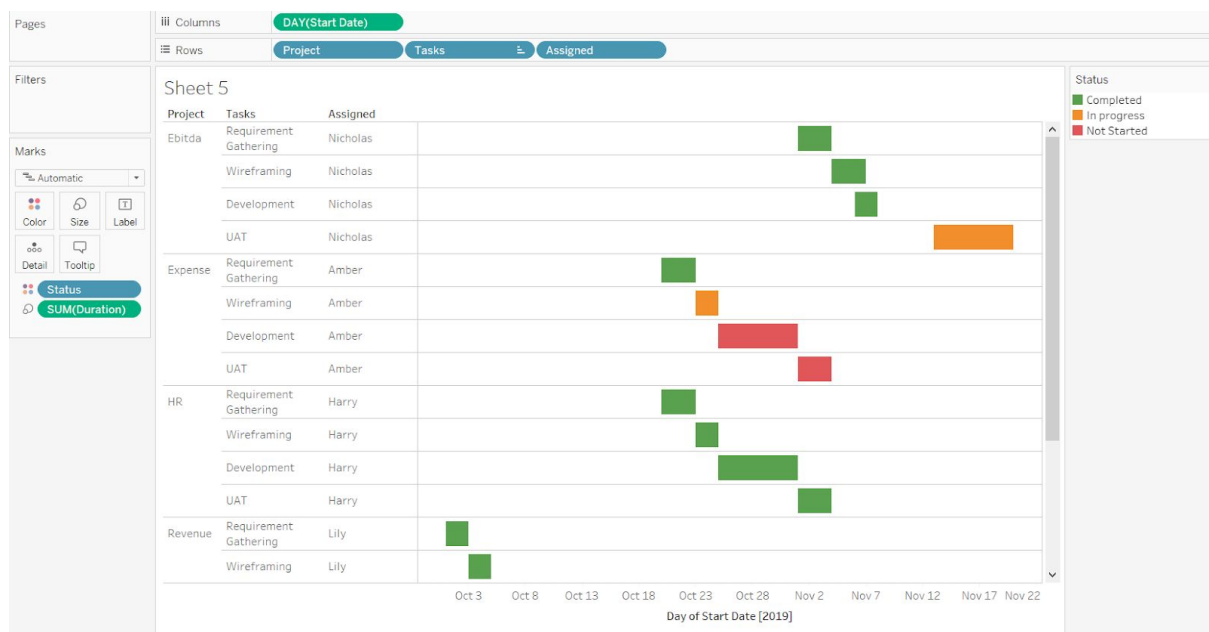
Step 5: In project management, both the start and end dates of a task are important. The project plan we are using for this guide does not have an end date, so we will have to calculate it using the start date and the task duration. The first step in doing this is to go to the Analysis tab and click on the Create Calculated Field option, as shown in the chart below.



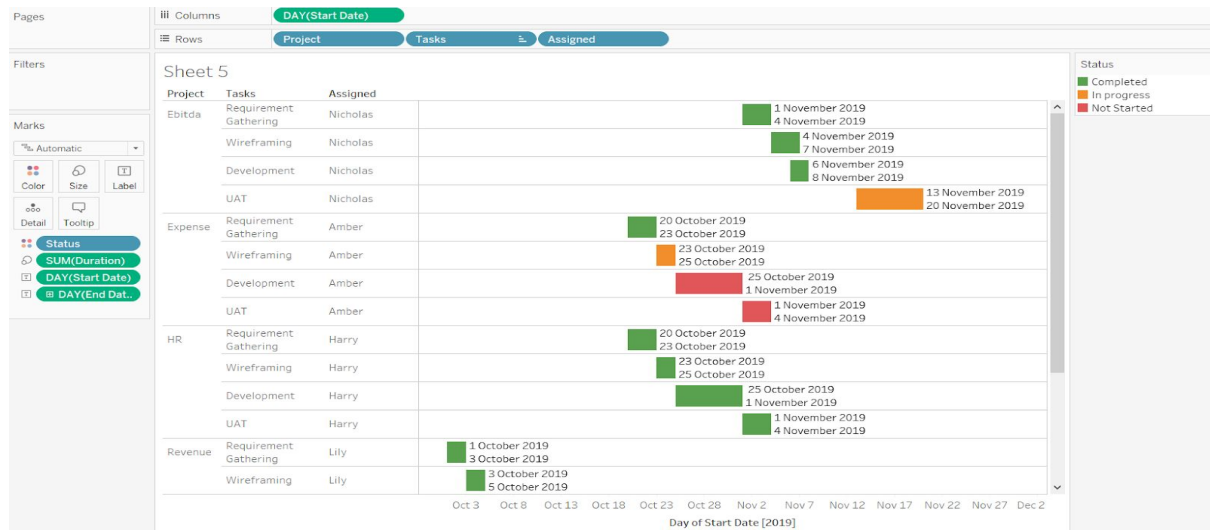
Step 6: Use the DATEADD function in Tableau to calculate the end date. To do this, we start by naming this calculation **End Date** and then pass in the argument **DATEADD('day', [Duration], [Start Date])** in the calculation box. We are passing the day argument in the above function as we want the aggregation to happen at a daily level. The function will simply add the days to the start date and will provide us with the end date.



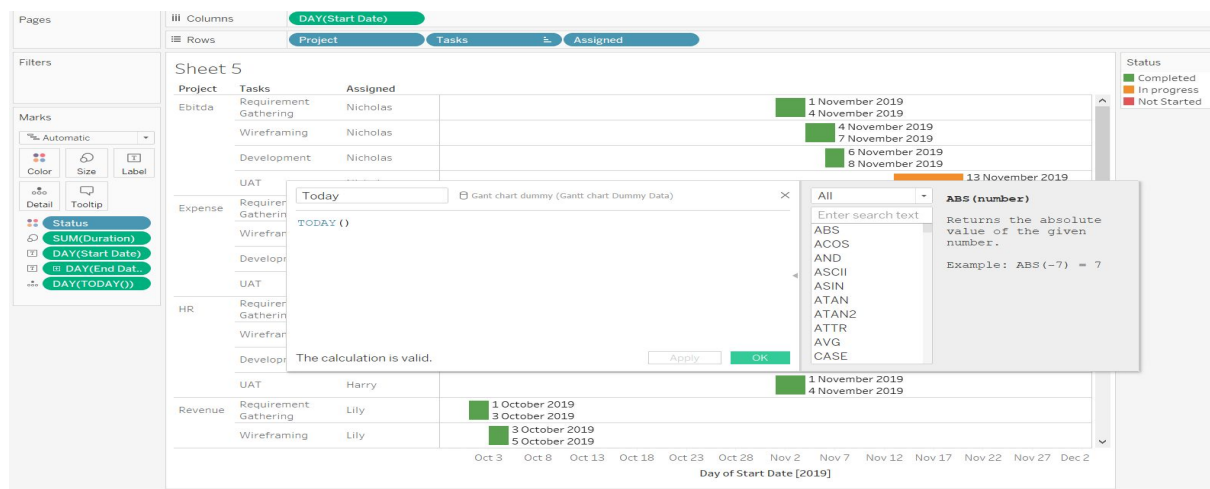
Step 7: We will place the **Status** variable in the Color property of the Marks shelf. Then we will edit the colors and assign green to *Completed*, orange to *In progress*, and red to *Not Started*, resulting in the following chart.



Step 8: We have added the end date to our data, and we can display it along with the start date in the chart. To do this, drag the **Start Date** and **End Date** into the Label property of the Marks shelf.



Step 9: One of the key requirements in project management is to track the progress of tasks with respect to today's date. To do this, we will create a new calculated field named **Today** by calling the function Today() and then dragging it to the Detail property of the Marks shelf.



We can always make a gantt chart more insightful by doing some formatting, we can also add a reference line to our chart.

Learn from Anthony B. Smoak how to make a gantt chart:
<https://www.youtube.com/watch?v=22H4ttDVl5c>