Practical 6: Apply the what – if Analysis for data visualization. Design and generate necessary reports based on the data warehouse data.

Example of what-if analysis in Excel:

"What-if" analysis is a powerful feature in Microsoft Excel that allows you to explore different scenarios by changing one or more variables in a formula. With what-if analysis, you can ask and answer questions like "What if I increase my sales by 10%?" or "What if I reduce my expenses by $1000?" and see the impact of those changes on your data

There are three main components:

Data Tables: A data table allows you to perform sensitivity analysis by calculating the results of a formula with different sets of input values.

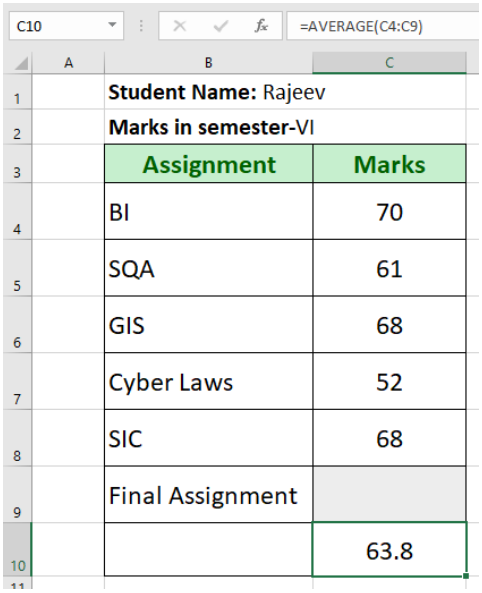
Goal Seek: Goal Seek allows you to determine what input value is necessary to achieve a desired output value by repeatedly changing one input value until the desired output value is reached.

Scenario Manager: Scenario Manager allows you to create and manage multiple scenarios, each of which represents a different set of input values for a model.

Example:

You have scored 63.8 marks and you need at least a 65 to pass the class. Luckily, you have one final assignment that might be able to raise your score. You can use Goal Seek to find out how much marks you need in one final assignment to pass the class.

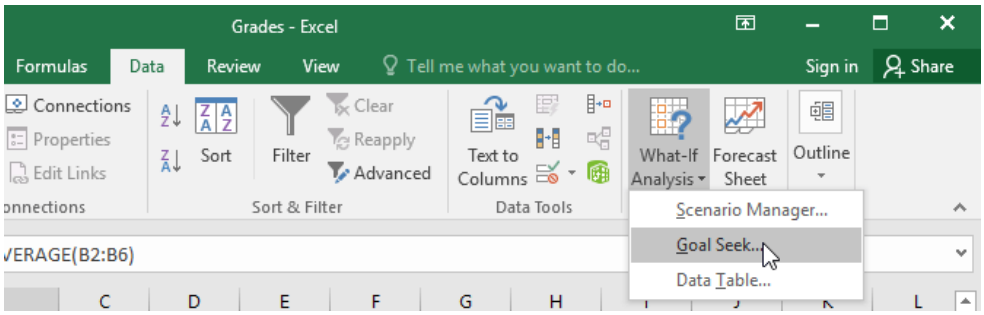
Consider the data as given below:



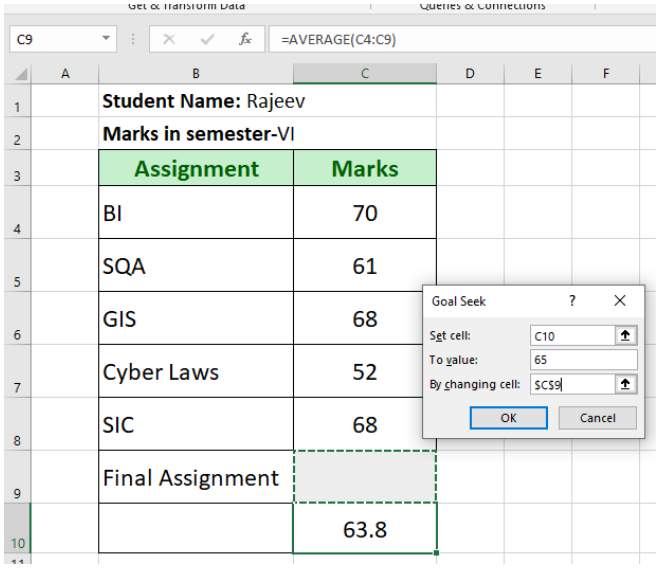
In image above, you can see that the marks are 70, 61, 68, 52 & 68. Marks of final assignment are not yet given. Now we will use use Goal Seek to know minimum marks in cell C9 to get average of 65.

Step1: **Select the cell** with the formula or function you want to modify. For Goal Seek, choose a cell that already has a formula or function. For instance, we'll select B7, which has the formula =AVERAGE(C4:C9), in our example.

Step2: From the Data tab, click the What-If Analysis command, then select Goal Seek from the drop-down menu.



Step3: A dialog box will appear with three fields: **Set cell** (which contains the desired result, in our example cell C10), To value (where we will enter 65 to pass the class), and By changing cell (which in our case is BC9 to determine the marks needed on the final assignment).



Step4: After clicking OK Button, you will find a following result

Student Name: Rajeev

Marks in semester-VI

Assignment	Marks
BI	70
SQA	61
GIS	68
Cyber Laws	52
SIC	68
Final Assignment	71
	65