Excel for Finance and Accounting

Learn how to optimize Excel formulas and functions for financial analysis

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Dedicated to

My beloved wife:

Shikha

&

My Son ***Eshansh***

About the Author

Suraj Kumar Lohani, the author of Excel for Finance and Accounting, is a seasoned finance and accounting professional with over 18 years of industry experience. He has worked in a variety of roles in both finance and accounting, from audit and assurance to financial analysis and management accounting.

Suraj Kumar Lohani's expertise lies in financial reporting, forecasting, and analysis, and he has extensive experience using Microsoft Excel to manage complex data and perform detailed financial modeling. He holds a Master's degree in Accounting and Finance from Symbiosis and has completed various professional certifications.

As an author, Suraj Kumar Lohani is passionate about sharing his knowledge and expertise with other professionals in the industry. He has designed Excel for Finance and Accounting to provide readers with a comprehensive guide to Excel that is both accessible and informative.

Suraj Kumar Lohani is dedicated to helping finance and accounting professionals enhance their technical skills and stay up-to-date with industry trends, and he hopes that Excel for Finance and Accounting will be a valuable resource for professionals in the field.

About the Reviewer

Prawesthi Testyaningrum is a tech startup enthusiast who concerns about education and youth empowerment. She is currently on her 8th year of experience in Finance & Accounting industry, started her first career as an Internal Auditor and her latest career as a Finance, Accounting & Tax Manager in one of the biggest conglomerate company in Indonesia. Throughout her career, she uses excel extensively on day to day basis including the cloud based one. Besides that, she also on her phase to get an Accounting Doctoral Degree to emphasize her passion in Finance & Education.

Lean procedures and automation without neglecting the SOP is the key in her career journey she always emphasizes. Thus, paperless data and excel automation are a must in her team. It makes her passionate in becoming the reviewer of this book, in the hope that it would be beneficial to the target readers.

Acknowledgement

Acknowledging the support and contributions of those who have helped bring a book to fruition is a vital component of the publication process. With that in mind, I would like to express my heartfelt gratitude to all those who have been involved in the creation of Excel for Finance and Accounting.

To begin, I want to extend my deepest appreciation to my wife Shikha and my son Eshansh, as their encouragement and belief in my abilities have been instrumental in keeping me motivated throughout the writing process. I also want to thank my editor, for their guidance and feedback, which has helped me to shape this book into its final form.

Additionally, I would like to express my appreciation to the team at BPB Publications, whose assistance has been invaluable in bringing this book to publication. I am also grateful to my colleagues in the finance and accounting industry, whose expertise and experiences have helped to shape the content of this book.

Lastly, I would like to thank the readers of this book for their support and engagement. It is my sincere hope that Excel for Finance and Accounting provides you with the knowledge and skills necessary to excel in your careers. Thank you all for your invaluable contributions.

Preface

In today's world, finance and accounting professionals are expected to possess a wide range of skills, from technical proficiency to critical thinking and problem-solving abilities. Among these skills, proficiency in Microsoft Excel is one of the most critical. Excel is a versatile tool that can help professionals in finance and accounting manage complex data, analyze financial information, and make informed business decisions.

This book, Excel for Finance and Accounting, has been written with the goal of providing a comprehensive and accessible guide to Excel for professionals in the finance and accounting industries. Whether you are a seasoned professional or just starting in your career, this book will help you to master Excel's capabilities and apply them to real-world financial and accounting scenarios.

The book covers a broad range of topics, from the basics of Excel to advanced functions and formulas, financial modeling, data visualization, and more. Each chapter includes practical examples and exercises that will help you to apply your new skills and knowledge to real-world scenarios.

I hope that this book will serve as a valuable resource for finance and accounting professionals looking to improve their Excel skills and enhance their ability to analyze financial information, make informed business decisions, and succeed in their careers.

Thank you for choosing Excel for Finance and Accounting.

Chapter 1: Getting Started with Advance Excel - Excel for Finance and Accounting starts with an introduction to Excel and its advanced features and functions. This chapter is designed to provide a comprehensive overview of Excel and its usage in Accounting and Finance.

Chapter 2: Preparing Financial Statements Smartly- Focuses on preparing Financial Statements smartly. This chapter covers the basics of financial statements, including types of financial statements, structure, and components. Additionally, readers will learn about equity and private equity.

Chapter 3: Calculating and Projecting Various Financial Ratios- Delves into financial ratio analysis. The chapter covers the importance of financial ratios in

identifying the financial health of a business. It includes an introduction to financial ratios and their types.

Chapter 4: Modeling Working Capital- Teaches readers about Working Capital Management. The chapter covers how to manage working capital efficiently and the consequences of mismanagement.

Chapter 5: Preparing Business Valuation Modeling- Dedicated to Business Valuation Modelling. The chapter teaches readers how to evaluate a business using different scenarios.

Chapter 6: Financial Modeling and Cash Flow Modeling- Covers Financial Modelling and Cash Flow Modelling. The chapter teaches readers different types of financial modelling and the step-by-step calculation of financial modelling and cash flow statements in Excel.

Chapter 7: Preparing Different Budgets With Analysis- Teaches readers how to prepare different budgets with analysis. This chapter covers operating and capital budgets in Excel.

Chapter 8: Capital Budgeting and Leverage Buyout Modeling- Focuses on Leverage Buyout Modelling and discounted cash flow. The chapter covers leverage and its meaning in Accounting and Finance.

Chapter 9: Dashboards With Excel- Concludes the book by teaching readers how to design business dashboards step-by-step.

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Chapter 1
Getting Started with Advance Excel

Introduction

Excel is the one on the most powerful spreadsheets program and is frequently used by finance professionals. Advanced Excel training focuses on several critical skills that can be utilized and can add value to almost any position in a company. We benefit from advanced Excel training in many ways, from adding value to learning better tools to improve productivity.

After completing this chapter, you will become a proficient user and be able to work with various functions of Excel and use pivot tables, visualizations, and other advanced features. You will become one of the top Excel users.

Structure

In this chapter, we will discuss the following topics:

- Table and Its Uses
- Conditional Formatting
- Custom Number Formatting
- What if Analysis

- Advance Functions
- Lookup Functions
- Advance Features
- Dynamic Ranges
- Pivot Table and Chart
- Macros

Objectives

To deep dive into Excel in accounting and finance, we need to start from scratch. First, we will learn what Excel is and how we can use it. Then, we will look at various advanced features and functions. We will understand how to create equations that can allow us to provide more data on company functions, such as workflow, project efficiency, financial projections, and budgets, and even inventory levels and usage.

Excel Table and Its Uses

Excel Table is a table that commands the conversion of a list of data into a formatted Excel Table. We can use tables for many features, such as sorting and filtering, and to help us organize and view our data. We can use an Excel Table as a database to unlock additional Excel properties. An Excel Table can be handy and make Excel sheets easier to use. *Figure 1.1* is an example of a table:

	A	B	C	D	E
1	Student Roll N	Student Nam	Marks	Grade	Result
2	1	Matthew Wells	56	C+	Pass
3	2	Marie Howell	72	B+	Pass
4	3	Henry Gardner	67	B	Pass
5	4	Ann Ward	43	C	Fail
6	5	Michelle Evans	85	A	Pass
7	6	Patrick Gordon	30	E	Fail
8	7	Ralph Gilbert	92	A+	Pass
9	8	Phillip Hawkins	76	B+	Pass
10	9	Eugene Snyder	48	C	Pass
11	10	Kathleen Wagner	37	D	Fail

Figure 1.1: *Table Format in Excel*

As shown in the previous figure, Excel has its default template format of a table with blue banded rows, but we can change it as per our requirement. To do this, select any cell of the current Table, and a Table Design Tab will appear in the ribbon by default.

We can change the format from Table Design Tab from Table Styles, as shown in *Figure 1.2*:

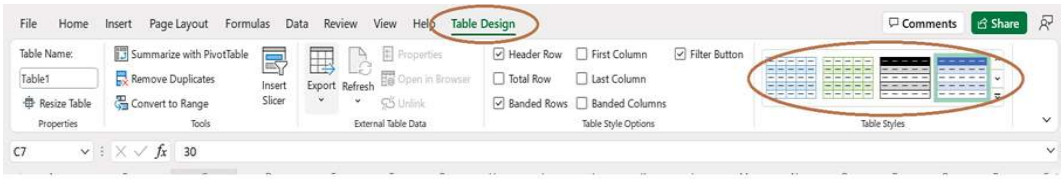


Figure 1.2: *Tab Style Path*

We can also create our custom Table Designs, for which we need to follow these steps:

1. Go to Table Styles and click on the right-most popup, as shown in *Figure 1.3*:

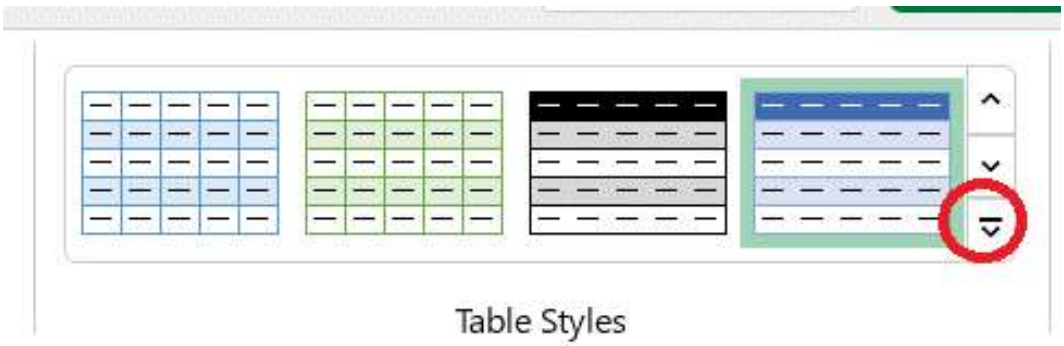


Figure 1.3: *Popup to click on in Table Styles Group*

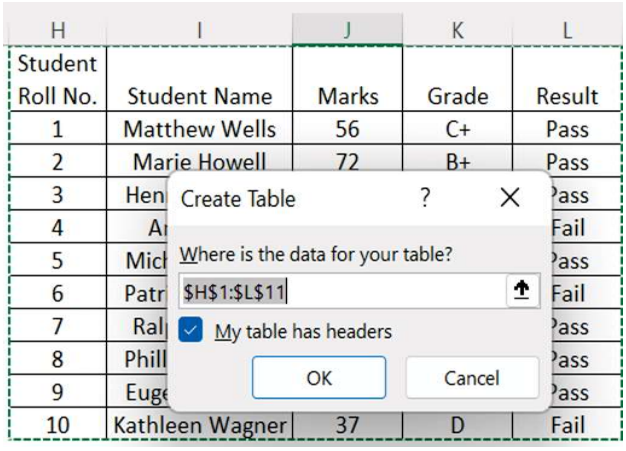
2. Then, select New Table Style, as shown in *Figure 1.4*:

Figure 1.4: *Click on Clear to clear the formatting*

3. To clear the table formatting, click on Clear as shown in *Figure 1.4*.

Now we will learn to create a table in an Excel spreadsheet.

Select a set of data, go to the Insert tab, click on table or use the shortcut *Ctrl + T*, as shown in *Figure 1.5*:



Student Roll No.	Student Name	Marks	Grade	Result
1	Matthew Wells	56	C+	Pass
2	Marie Howell	72	B+	Pass
3	Henry Gardner	67	B	Pass
4	Ann Ward	43	C	Fail
5	Michelle Evans	85	A	Pass
6	Patrick Gordon	30	E	Fail
7	Ralph Gilbert	92	A+	Pass
8	Phillip Hawkins	76	B+	Pass
9	Eugene Snyder	48	C	Pass
10	Kathleen Wagner	37	D	Fail

Figure 1.5: *Inserting a table*

Advantages of Excel Table

Tables headers remain visible even when we scroll down the sheet/table.

Filters are automatically available in a table, so we don't need to add separate filters.

Every Excel Table column has its name range. It makes Excel Data dynamic, as shown in *Figure 1.6*:

	A	B	C	D	E
1	Student Roll N	Student Nam	Marks	Grade	Result
2	1	Matthew Wells	56	C+	Pass
3	2	Marie Howell	72	B+	Pass
4	3	Henry Gardner	67	B	Pass
5	4	Ann Ward	43	C	Fail
6	5	Michelle Evans	85	A	Pass
7	6	Patrick Gordon	30	E	Fail
8	7	Ralph Gilbert	92	A+	Pass
9	8	Phillip Hawkins	76	B+	Pass
10	9	Eugene Snyder	48	C	Pass
11	10	Kathleen Wagner	37	D	Fail
12					
13					
14	=Table1[Student Roll No.]				

Figure 1.6: *Table Name Range*

Tables have different options, as shown in *Figure 1.7*:

Figure 1.7: *Different Table Styles Options*

- **Header Row**: It displays the header of a table. If a header row is unchecked, the header of the table will disappear.
- **Total Row**: It displays the subtotal function with different parameters.
- **Banded Row/Column**: They display alternate row or column shading, respectively.
- **First column/last column**: They are the special display formatting for the first and the last columns of the table.
- **Filter Button:** The filter will disappear when the Filter button is unchecked.

Now, we will learn to name an Excel table.

Select a table and go to the table design and then to Properties. Table1 will display by default for the first table of the Workbook; you can rename it:

Figure 1.8: *How to rename a table in Excel*

Select Table1 and rename it, as shown in *Figure 1.8*.

Conditional Formatting

Conditional formatting allows us to automatically apply formatting, such as colors, icons, and data bars. It takes your Excel sheet's layout and design options to the next level. It makes our spreadsheet look fantastic, lets us make sense of our data, and spot essential cues in the blink of an eye.

It works like an "if this, then that" statement.

Every conditional formatting rule is made up of three parts:

- **Range**: We start by selecting the cells to which the rule will apply. This might be just a selection of rows, columns, or an entire workbook.
- **Condition**: This is the "if" part of the if/then clause. We can choose from various options, including formulas.
- **Formatting**: This is the "then" part of the if/then clause. Excel has a default styling for every condition, but we can also customize it.

Follow the given steps to apply conditional formatting in a range of cells or a table:

1. Select the range and go to Home tab – Style Group – Conditional Formatting, as shown in *Figure 1.9*:

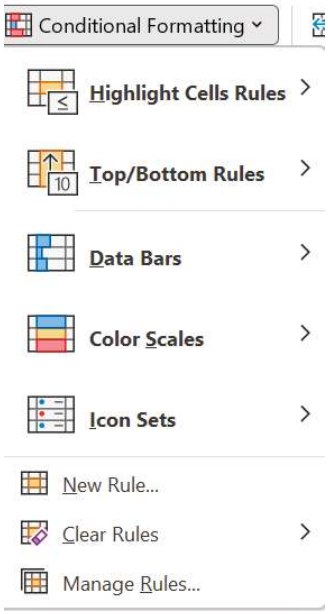


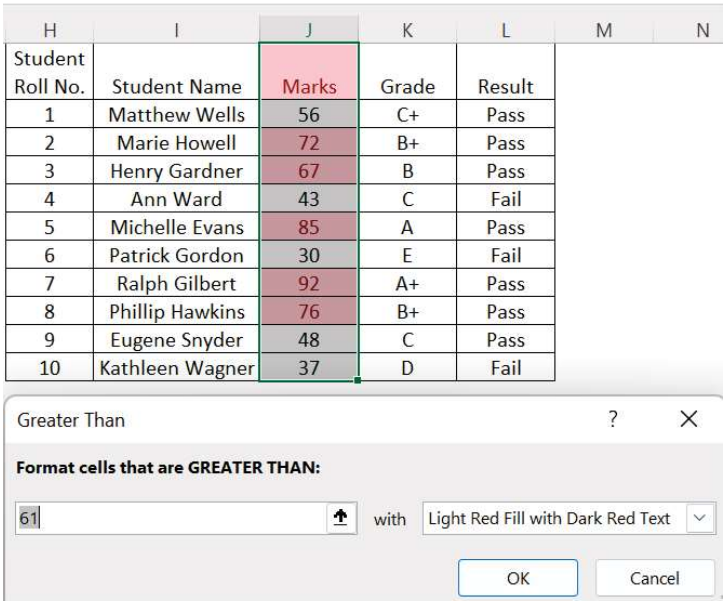
Figure 1.9: *Conditional Formatting*

2. Select a conditional formatting category, as shown in the previous figure:
    a) **Highlight Cells Rules:** Focus on general analysis. Default conditions include Greater Than, Less Than, Between, Equal To, Text That Contains, Date Occurring and Duplicate Values.
    b) **Top/Bottom Rules:** Focus on the high and low values in the worksheet. Default conditions include Top 10 Items; Top 10%; Bottom 10 Items; Bottom 10%; Above Average; Following Average.

c) **Data Bars:** Colored bars that appear in the cells. The longer the bar, the higher the value in that cell.

d) **Color Scales:** Cells are shaded with different color gradients, depending on the relative value of each cell compared to other cells in the range.

e) **Icon Sets:** Different shaped or colored icons appear in cells, based on each cell's value.



Student Roll No.	Student Name	Marks	Grade	Result
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3	Henry Gardner	67	B	Pass
4	Ann Ward	43	C	Fail
5	Michelle Evans	85	A	Pass
6	Patrick Gordon	30	E	Fail
7	Ralph Gilbert	92	A+	Pass
8	Phillip Hawkins	76	B+	Pass
9	Eugene Snyder	48	C	Pass
10	Kathleen Wagner	37	D	Fail

Figure 1.10: *Condition whatever we want*

3. As shown in *Figure 1.10,* we must follow the steps to complete conditional formatting. Select Cells to apply conditional formatting I.

   As shown in *Figure 1.10,* select the Marks column.

Apply Conditional Formatting.

We type 61 in our example.

Define Criteria and Get Format Cells

Select Criteria as shown in figure 1.10

Custom Number Formatting

Custom Number Format controls the execution of numerical values in a spreadsheet. This feature enables various kinds of formatting that can be applied to the data, especially numbers. It is used to perform many formatting on numbers automatically,

and it is totally different from Conditional Formatting. We will learn this with the help of an example.

To apply custom number formatting formatting on a range of cells or a table.

Select the range and Go to Home Tab | Number Group | Dialog Launcher -Select from Dialog Box – Custom (shortcut CTRL + 1), as shown in *Figure 1.11:*

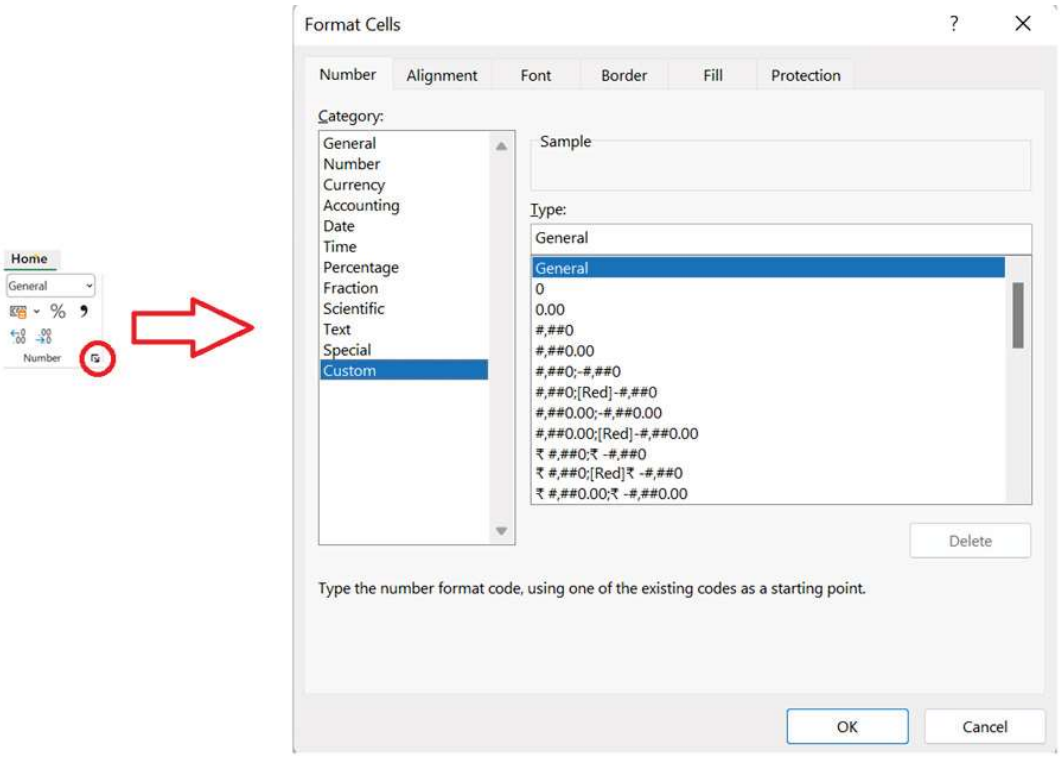

Figure 1.11: *Custom Formatting Dialog Box*

4 Parts of a Number Format Rule

There are four types of custom format" positive, negative, zero and text with the use of ;;;

There are four parts or sections to a ***Custom Number Format*** rule. The first section is required, while the other three are optional. Each section is divided with a semicolon (;) in this order [POSITIVE; NEGATIVE;ZEROS;TEXT]. Here's what each part of the number format rule represents:

- If the number is **positive,** then do this…
- If the number is **negative,** then do this…
- If the number equals **zero,** then do this…

- If the value is **not a number,** then do this…

  Example: [#,##0.00;#,##0.00;"-";[Red}@

In the previous example:

- #,##0.00 before the first semicolon means the number in the cell will display decimal places and thousands separator in case of positive numbers (If the value is 1000, it will display 1,000.00).
- #,##0.00 before the second semicolon means the number in the cell will display 2 decimal places and thousands separator in case of negative numbers (if the value is -1000, it will display -1,000.00).
- "-" before the third semicolon means the number in the cell will display – in case number is zero (if the value is 0, it will display -).
- [Red]@ in the last section means the cell value is text, and the font will be displayed in red.

Display text without converting cell to text format

If we type text along with numeric values in a cell, Excel automatically converts that cell to a text format, making it unusable for formulas and other mathematical calculations. If we want a specific text displayed next to a number without changing the number to text format, we may want to consider adding the text value to the number code.

For example, as shown in *Figure 1.12*, to add the text **"Kgs"**, we would use the following code: **General Kgs**

```
#,### "Kgs"
```

Figure 1.12: *To Add Text in a Number*

Use *, as shown in *Figure 1.13*, to give space between number and custom format text:

```
-03    Your
```

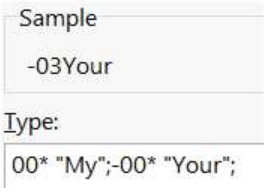

Figure 1.13: *To Add Space Between Number and Custom Format Text*

If we want to show the blank cell instead of Value Zero, we need to add a custom format, as shown in *Table 1.1*:

Actual Value	Custom Value	Remark
0		blank cell instead of zero

Table 1.1: *Blank cell instead of zero*

We need to add the formatting shown in *Figure 1.14*:

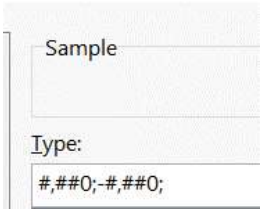

Figure 1.14: *Custom Number formatting for blank cell for zero value cell*

If we want to show the text instead of numeric values, we need to add a custom format, as shown in *Table 1.2*:

Actual	Custom Value	Remark
-10	Negative Value	Cell Value is Negative
5	Positive Value	Cell Value is Positive
0	Zero Value	Cell Value is Zero

Table 1.2: *Text instead of Numbers*

To apply this custom format, we need to type as shown in *Figure 1.15:*

***Figure 1.15**: To Add Text instead of Numbers*

Shortcuts For Number Formats

There are shortcuts available to apply formatting instantly, as listed in *Table 1.3*:

Shortcut Key	Description
Ctrl + Shift + ~	Applies general formatting to the selected cells
Ctrl + Shift + $	Applies currency formatting to the selected cells
Ctrl + Shift + %	Applies percentage for formatting to the selected cells
Ctrl + Shift + ^	Applies scientific formatting to the selected cells
Ctrl + Shift + #	Applies date formatting to the selected cells
Ctrl + Shift + @	Applies time format to the selected cells

***Table 1.3:** Shortcuts for Number formatting in Excel*

What if Analysis

What-If Analysis is the process of changing the values in cells to see how those changes will affect the outcome of formulas on the worksheet. By using What-If Analysis tools in Excel, we can use several different sets of values in one or more formulas to explore the various results.

Excel has three types of What if Analysis features:

- Goal Seek
- Scenario Manager
- Data Table

Goal Seek

Goal Seek is the most common What if Analysis tool in MS Excel. It is a problem-solving approach that involves identifying and obtaining the desired outcome or

solutionby changing an assumption that drives it. If we know the result we want from a formula, we can use **Goal Seek** in **Excel**:

	A	B
1	**Student**	**Marks**
2	Math	76
3	English	87
4	Science	95
5	Hindi	91
6	Social Study	
7	Total	349

Figure 1.16: *Marks for Subjects for goal seek*

In *Figure 1.16*, B7 calculates the sum of all subjects' marks. The marks for Social Study are the input in cell B6. In this example, we are considering Total Marks as 440. Now, the Goal Seek is required to know the result of sum(B2:B6) in cell B7. After this, we will get the Marks of Social Study in B6. Following are the steps:

1. On the Data tab, in the Forecast group, click on **What-If Analysis** and then on **Goal Seek**:

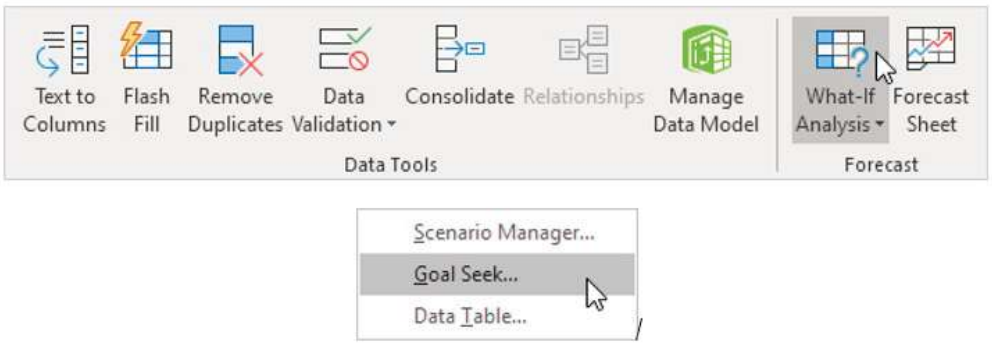

Figure 1.17: *Path for Goal Seek*

2. The Goal Seek dialog box appears.
3. Select cell B7. Click in the 'To value' box and type 440.
5. Click in the 'By changing cell' box and select cell B6.