

ChatGPT:

Great choice!  You've picked **Topic 6: IF Function (basic logic)**.
This is one of the most useful skills in Excel — it lets you make decisions inside your spreadsheet.

Tutorial: IF Function (Basic)

Objective

Learn how to use the **IF function** to check a condition and return one value if it's true, and another if it's false.

Why it Matters

- Helps with grading (Pass/Fail).
 - Flags overdue payments.
 - Categorizes data automatically.
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Steps

1. Formula structure:

```
sql
=IF(condition, value_if_true, value_if_false)
```

- condition → a test (e.g., $A2 \geq 50$).
- value_if_true → result if the test is true.
- value_if_false → result if the test is false.

2. Type the formula into a cell.

3. Drag-fill to apply it to more rows.

Worked Example

Imagine exam marks in column **B**:

- If mark ≥ 50 → "Pass"
- Otherwise → "Fail"

Formula in C2:

```
arduino
=IF(B2>=50,"Pass","Fail")
```

Try-it Tasks (will be in workbook)

- Starter: Write an IF formula to show "Adult" if age ≥ 18 , otherwise "Child".
 - Core: Add a column to show "Discount" if purchase ≥ 100 , else "No Discount".
 - Stretch: Nest IF → Grade system:
 - ≥ 80 → "A"
 - ≥ 50 → "Pass"
 - < 50 → "Fail"
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Common Mistakes

- Forgetting quotes around text ("Pass").
 - Using = instead of \geq or \leq .
 - Mixing up commas vs semicolons (depends on regional Excel settings).
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Quick Recap

- =IF(condition, true, false)
- Conditions are like **yes/no questions**.
- Useful for grading, categories, flags.

👉 Next step: I'll generate a **starter workbook** for you with:

- **Data** (marks, ages, purchases).
- **Tasks** (starter → stretch).
- **Hints & Answers** (to self-check).
- **Checklist** (skills covered).

Would you like me to:

1. Generate a **Python script** that creates the workbook (you run it to get the `.xlsx` file), OR
2. Give you **copy-paste tables** directly into Excel (quick and easy)?

User:

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ChatGPT:

Awesome — here's a complete **Python (openpyxl)** script that builds your **IF Function (basic logic)** starter workbook with all sheets, sample data, tasks, hints, answers, validation lists, and a simple chart. Copy it into a file and run locally to create the `.xlsx`.

How to run (Windows & Mac)

1. Install Python 3.9+ (if not already).
2. Open a terminal/Command Prompt and install the library:

```
nginx
pip install openpyxl
```

3. Save the script below as `if_function_starter.py`.
4. Run it:
 - Windows: `python if_function_starter.py`
 - Mac: `python3 if_function_starter.py`
5. It will create `IF_Function_Starter.xlsx` in the same folder.

Note: I can't create/download files from here; running the script on your computer saves the workbook locally.

```
python
# if_function_starter.py
# Creates an Excel workbook for N Level practice: IF function (basic logic)
# Sheets: Instructions, Data, Tasks, Hints, Answers, Checklist, Lookup
# Includes table formatting, data validation, and a simple chart.

from openpyxl import Workbook
from openpyxl.styles import Font, Alignment, PatternFill, Border, Side
from openpyxl.utils import get_column_letter
from openpyxl.worksheet.datavalidation import DataValidation
from openpyxl.worksheet.table import Table, TableStyleInfo
from openpyxl.chart import BarChart, Reference
from datetime import datetime

# ----- helpers -----
def set_col_width(ws, widths):
    for col, width in widths.items():
        ws.column_dimensions[col].width = width

def title(ws, text, cell="A1"):
    ws[cell] = text
    ws[cell].font = Font(size=16, bold=True)
```