

The screenshot shows a code editor window with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Search Bar:** Search
- Toolbar:** Standard icons for file operations.
- Left Sidebar:** EXPLORER (NO FOLDER OPENED), OUTLINE, TIMELINE.
- Code Area:** A Python script named `simulasi1.py` containing code to generate a truth table for logical implication using `itertools`. The code defines a function `implies(p, q)` and iterates over all combinations of p and q (True/False) to print their values and the result of $p \rightarrow q$.
- Status Bar:** Ln 9, Col 95, Spaces: 4, UTF-8, CRLF, Python, 3.13.7, 2046, 02/11/2025.

The screenshot shows the same code editor window after running the script, with the following details:

- File Menu:** File, Edit, Selection, View, Go, Run, ...
- Search Bar:** Search
- Toolbar:** Standard icons for file operations.
- Left Sidebar:** EXPLORER (NO FOLDER OPENED), OUTLINE, TIMELINE.
- Terminal Tab:** Shows the command `PS C:\Users\ASUS> & C:/Users/ASUS/AppData/Local/Programs/Python/Python313/python.exe c:/Users/ASUS/Documents/simulasi1.py` and the output of the truth table:

p	q	p and q	p or q	$\neg p$	$p \rightarrow q$
True	True	True	True	False	True
True	False	False	True	False	False
False	True	False	True	True	True
False	False	False	False	True	True

- Status Bar:** Ln 9, Col 95, Spaces: 4, UTF-8, CRLF, Python, 3.13.7, 2046, 02/11/2025.

The screenshot shows a code editor window in Visual Studio Code (VS Code) with the following details:

- File Path:** C:\Users\ASUS\Documents\pembuktian2.py
- Code Content:**

```
1 #Jika n² ganjil, maka n juga ganjil.
2 #Kita buktikan secara logika bahwa kebalikannya menghasilkan kontradiksi.
3
4 def is_odd(n):
5     return n % 2 != 0 # Lebih akurat: ganjil jika sisa bagi 2 bukan 0
6
7 def proof_by_contradiction():
8     """
9         Membuktikan pernyataan: "Jika n² ganjil, maka n juga ganjil."
10        Dengan proof by contradiction: Asumsikan kebalikannya benar, yaitu ada n genap dengan n² ganjil.
11        Jika tidak ditemukan kontradiksi, maka pernyataan asli benar.
12    """
13
14    for n in range(1, 101): # Periksa hingga n=100 untuk lebih komprehensif
15        if is_odd(n**2) and not is_odd(n): # Jika n² ganjil tapi n genap
16            print(f"Kontradiksi ditemukan pada n={n}!")
17            return False
18    print("Tidak ada kontradiksi ditemukan → pernyataan benar (jika n² ganjil maka n ganjil).")
19
20    # Jalankan fungsi
21    proof_by_contradiction()
22    import itertools
```

- Status Bar:** Ls 22, Col 17 | Spaces: 4 | UTF-8 | CR/LF | Python | 3.13.7 | 20:47 | 02/11/2025

The screenshot shows the same code editor window with the terminal tab selected, displaying the following output:

```
PS C:\Users\ASUS> & C:/Users/ASUS/AppData/Local/Programs/Python/Python313/python.exe c:/Users/ASUS/Documents/pembuktian2.py
Tidak ada kontradiksi ditemukan + pernyataan benar (jika n² ganjil maka n ganjil).
PS C:\Users\ASUS>
```

This indicates that the script ran successfully and printed the expected result.

Status Bar: Ls 22, Col 17 | Spaces: 4 | UTF-8 | CR/LF | Python | 3.13.7 | 20:48 | 02/11/2025

A screenshot of the Visual Studio Code (VS Code) interface. The top menu bar includes File, Edit, Selection, View, Go, Run, etc. The status bar at the bottom shows Spaces: 4, UTF-8, Python, 3.13.7, and 20:51 02/11/2025. The main area displays the following Python code:

```
C: > Users > ASUS > Documents > import itertools2.py > ...
1 import itertools
2
3 def implies(a, b):
4     """Fungsi implikasi: a → b adalah True jika tidak (a dan not b)"""
5     return not (a and not b)
6
7 def check_tautology():
8     tautology = True
9     print("Memeriksa apakah (p ∧ q) → p adalah tautologi:")
10    for p, q in itertools.product([True, False], repeat=2):
11        result = implies(p and q, p)
12        print(f"p={p}, q={q}, (p ∧ q) → p = {result}")
13        if not result:
14            tautology = False
15    print("\nKesimpulan:", "TAUTOLOGI" if tautology else "BUKAN tautologi")
16
17 check_tautology()
```

A screenshot of the Visual Studio Code (VS Code) interface, similar to the first one but with a different terminal output. The top menu bar includes File, Edit, Selection, View, Go, Run, etc. The status bar at the bottom shows Spaces: 4, UTF-8, Python, 3.13.7, and 20:51 02/11/2025. The main area displays the following terminal output:

```
PS C:\Users\ASUS> & C:/Users/ASUS/AppData/Local/Programs/Python/Python313/python.exe "c:/Users/ASUS/Documents/import iterto
ols2.py"
Memeriksa apakah (p ∧ q) → p adalah tautologi:
p=True, q=True, (p ∧ q) → p = True
p=True, q=False, (p ∧ q) → p = True
p=False, q=True, (p ∧ q) → p = True
p=False, q=False, (p ∧ q) → p = True

Kesimpulan: TAUTOLOGI
PS C:\Users\ASUS>
```