Lab 4

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Mo Tu We Th Fr Sa Su

Chapter 7 explains, in Python, Boolean logic deals with values that are either 'True' or 'False', stored using the 'bool' data type named after George Boole, the founder of Boolean Algebra. Boolean expressions are often created using relational operators such as (and, or, not) allow us allow us to combine or invert these conditions — 'and' returns 'True' only if both sides are true, 'or' returns 'True' if at least one side is true, and 'not' flips truth value. Operator precedence matters in logic: arithmetic is evaluated first, then relational operators, followed by logical ones (not > and > or). Parenthesis should be used to ensure expressions evaluate in the intended order. De Morgan's Laws provide useful equivalences like not (A or B) being the same as not A and not B, and vice versa. Truth tables are used to visualize how logical expressions behave under all combination of input values, which is helpful when debugging or designing conditions in code.