Propositional Logic:

→ Simple form of logic where all statements are made up of propositions.

→ A proposition is a declarative statement that can be either true or false but cannot be both.

For example:

→ It is a sunday

→ The sun rises in the west

→ 3+3=7

→ 5 is a prime number.

Types of Propositions:

→ Atomic propositions

→ Compound propositions

→ Atomic propositions are the simple propositions. It consists of single proposition symbol. These are the sentences which must be either true or false.

For example:

2+2=4. (True)

Sun is cold (False)

→ Compound propositions are constructed by combining simple or atomic propositions, using parenthesis and logical connectives.

For example:

→ It is raining today, and street is wet

→ Areesha is a doctor, and her clinic is in Islamabad

Logical connectives:

Negation	(~)		
Conjunction	(∧)	T T	True
Disjunction	(∨)	F F	False
Implication	(→)	T F	False
Biconditional	(↔)	T T	→ True
		F F	→ True