

## Assignment

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Q: Difference between else-if ladder and switch statement?

A:

	<b>else-if ladder</b>	<b>switch</b>
Syntax	Series of "if" and "else if" statements	Switch statement with "case" and "default" statements
Evaluation	Conditions evaluated sequentially	Expression evaluated once, jumps to matching case
Execution flow	Sequential: Only the first true condition is executed	Direct jump to matching case or default
Time	Each condition is evaluated, potentially taking more time	Expression evaluation is faster due to direct matching
Readability	May become lengthy and complex with multiple conditions	Can provide a more concise and readable code
Default case	Optional "else" block for all other cases	Optional "default" case executed if no match found

In an **"else if" ladder**, each condition is **evaluated sequentially**. This means that every condition in the ladder is checked one after another until a true condition is found. As a result, if there are multiple conditions, **it may take longer time** to find a matching condition, especially if the true condition is towards the end of the ladder.

In a **"switch"** statement, the expression is evaluated only once. **The execution jumps directly to the matching case**, bypassing the need to evaluate each case sequentially. **It takes shorter time to find a matching condition.**

**This makes the "switch" statement faster than an "else if" ladder when there are multiple cases.**