📌 Understanding the `if` Statement in JavaScript

The `if` statement allows JavaScript to execute a block of code **only if a condition is true**.

◆ Basic Example

```
var x = prompt("Where does the Pope live?");
if (x === "Vatican") {
    alert("Correct!");
}
```

✓ The `prompt()` asks the user a question and stores the response in `x`.
✓ The `if` statement checks if `x` is **exactly equal** (`===`) to `"Vatican"`.
✓ If the condition is **true**, the alert `"Correct!"` is displayed.
✓ If the user enters anything else, **nothing happens**.

◆ Understanding `===` vs `==`

- **`===` (Strict Equality)** → Checks both **value and data type**.
- **`==` (Loose Equality)** → Converts data types if needed before comparison.

Example: `==` vs `===`

```
console.log(5 == "5");   // ✅ true (Loose equality converts "5" to number)
console.log(5 === "5");  // ❌ false (Strict equality checks type too)
```

✓ Using `===` prevents unintended **type conversion** bugs.

◆ Using Variables in `if` Statements

```
var correctAnswer = "Vatican";
if (x === correctAnswer) {
    alert("Correct!");
}
```

✓ This makes the code **easier to update and maintain**.

◆ Multiple Actions When Condition is True

You can execute multiple statements inside the `if` block:

```
var correctAnswer = "Vatican";
if (x === correctAnswer) {
    score++;            // Increase score
    userIQ = "genius";   // Set IQ level
    alert("Correct!");
}
```

✓ **All statements inside the `{}` execute** if the condition is met.

◆ `if` Without `{}` for One-Liners

If there is only **one statement**, curly brackets `{}` **can be omitted**:

```
if (x === "Vatican") alert("Correct!");
```

✓ **Legal but not recommended** for readability.

◆ Handling Case Sensitivity

If the user types `"vatican"` instead of `"Vatican"`, the check **fails**.
To make it case-insensitive:

```
if (x.toLowerCase() === "vatican") {
    alert("Correct!");
}
```

✓ `.toLowerCase()` converts user input to **lowercase** before checking.

◆ Handling Multiple Correct Answers

```
if (x === "Vatican" || x === "The Vatican") {
    alert("Correct!");
}
```

✓ **`||` (OR operator)** allows multiple valid responses.

💡 Quick Summary

✓ if **executes code only if the condition is true**.
✓ Use `===` instead of `==` for **strict comparison**.
✓ Curly brackets `{}` **can be omitted for one-liners** (not recommended).
✓ **Use `.toLowerCase()` for case-insensitive comparisons**.
✓ **Use `||` to allow multiple correct answers**.
