

Selection

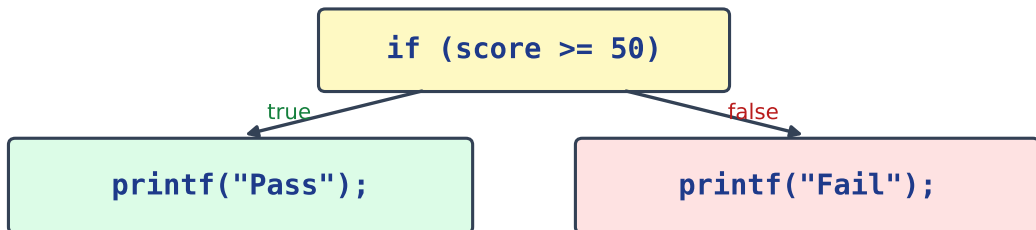
C Reference

if / else

An **if** runs a block when a condition is true. C has no real boolean type by default: 0 is false and any non-zero value is true. Chain choices with **else if** and **else**. Compare with **==**, **!=**, **<**, **>**, **<=**, **>=**.

```
#include <stdio.h>

int main(void) {
    int score = 72;
    if (score >= 90) {
        printf("A\n");
    } else if (score >= 60) {
        printf("Pass\n");
    } else {
        printf("Fail\n");
    }
    return 0;
}
```



Exam tip: braces { } group the body; only one branch runs; else is optional

if chooses the true branch; else the false branch

switch

A **switch** picks one **case** by an integer value. Each **case** needs a **break** to jump out — without it, C "falls through" into the next case. **default** runs when nothing matches.

```
#include <stdio.h>

int main(void) {
    int day = 3;
    switch (day) {
        case 1: printf("Mon\n"); break;
        case 2: printf("Tue\n"); break;
        case 3: printf("Wed\n"); break;
        default: printf("Other\n");
    }
    return 0;
}
```

Common mistakes

- `if (x = 5)` assigns and is always true; use `==` to compare.
- Each **switch** case needs a **break**;, or it falls through to the next.
- 0 is false and any non-zero value is true in a condition.