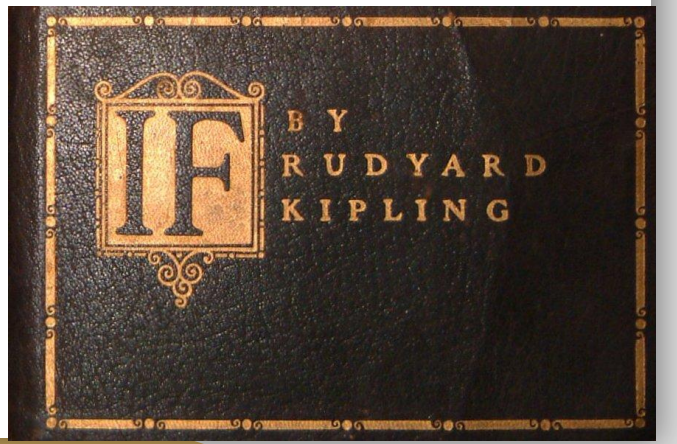
Conditionals

Conditionals (pseudocode notation)

- **If** <something is true>
  - <Do something>

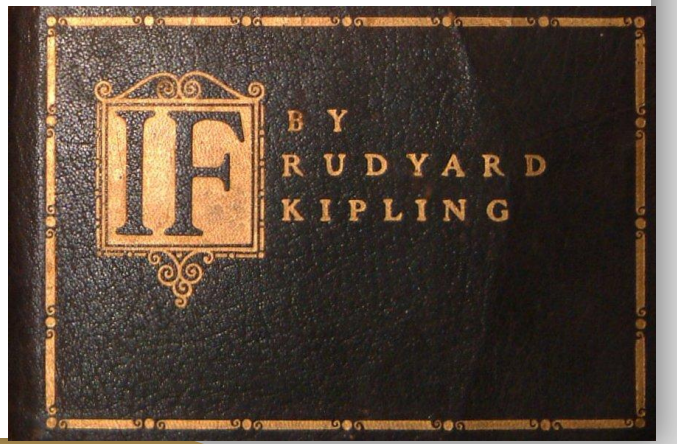
Example...

- **If** <humidity >= 90%>
  - No sportcoats



Conditionals (C Notation)

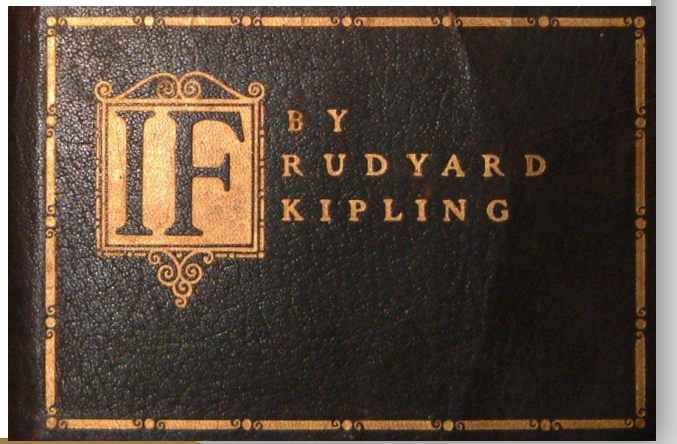
```
if (temp >= 90) {
        printf(“No sportcoats\n”);
}
```



Conditionals (C Notation)

```
if (temp >= 90) {
        printf("No sportcoats\n");
}
```

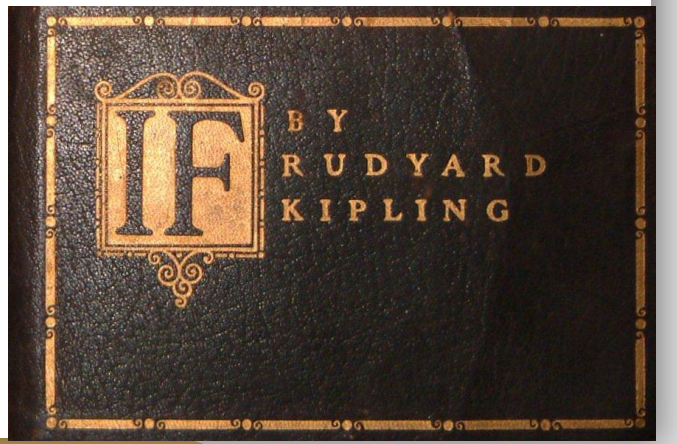
"if" is lowercase, along the right column of the current indentation



Conditionals (C Notation)

```
if (temp >= 90) {
    printf("No sportcoats\n");
}
```

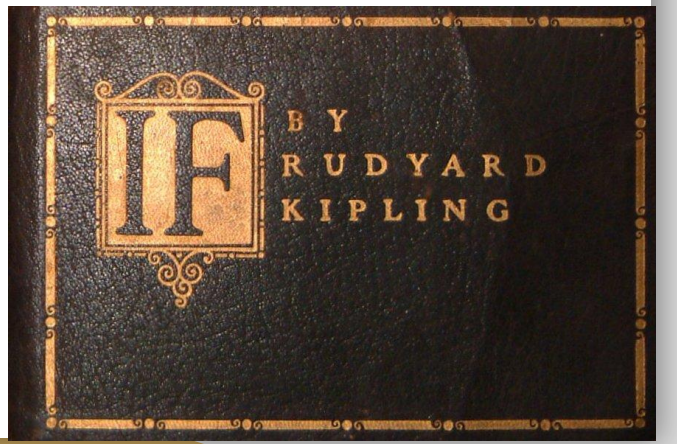
Mathematical truth statement - if this is valid (true), the if statement is valid



Conditionals (C Notation)

```
if (temp >= 90) {
    printf("No sportcoats\n");
}
```

In this statement, *temp* should be declared and initialized before use in the if statement

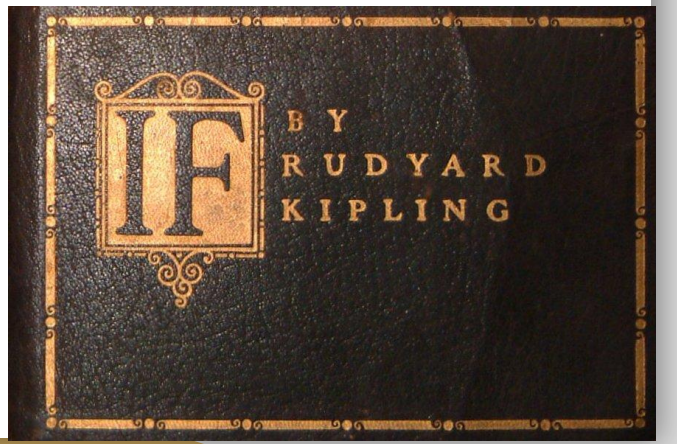


Conditionals (C Notation)

```
if (temp >= 90) {
    printf("No sportcoats\n");
}
```

NO SEMICOLON

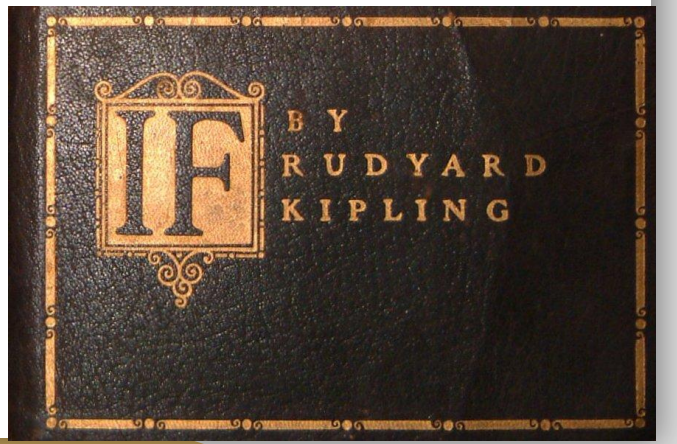
If statements end in {} → similar to main()



Conditionals (C Notation)

```
if (temp >= 90) {
    printf("No sportcoats\n");
}
```

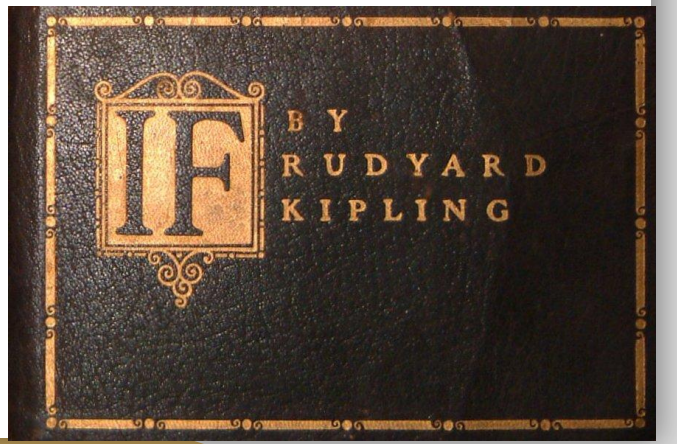
Any code can go inside the if statement → but it MUST be tabbed in one level



Conditionals (C Notation)

```
if (temp >= 90) {
        printf(“No sportcoats\n”);
}
```

Every {} → one tab



Relational Operators

“Equals” → ==

“Does not equal” → !=

“Less than” → <

“Greater than” → >

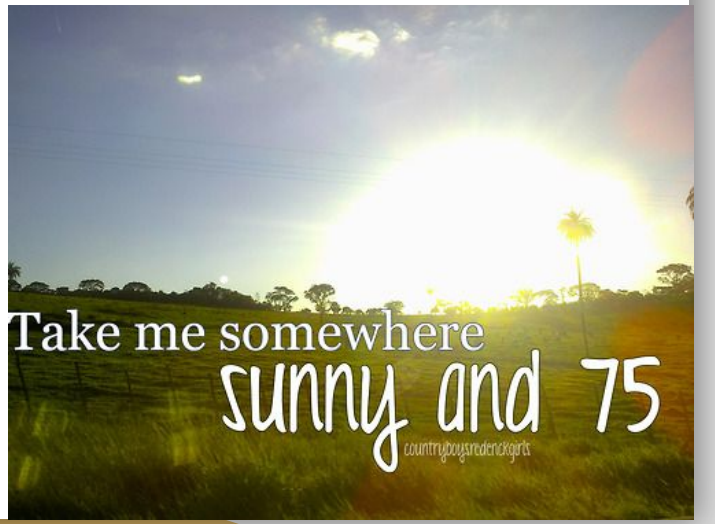
“Greater than or equal to” → >=

“Less than or equal to” → <=

Conditionals (C Notation)

Example if statements:

```
if (temp == 75) {
      printf(“Temp is exactly 75\n”);
}
```



Conditionals (C Notation)

Example if statements:

```
if (temp != 75) {
        printf(“Temp is anything but 75\n”);
}
```

If Statement Challenge 1

- Scan in a number
- If that number is 42, print out “You have found the meaning of life”
- If that number is not 42, print out “Keep searching”

Challenge

Create a program that scans in wind speed of a hurricane. The category of the hurricane should be printed to the screen based on the following conditions:

157+ winds : Category 5;	130-156 winds: Category 4	111-129 winds: Category 3
96-110 winds: Category 2	74 - 95 winds: Category 1	<74: Tropical Storm

Challenge

Create a program that scans in wind speed and storm surge. Categorize the storm based on the criteria below. If a storm does not meet the criteria, you are not required to print anything.

157+ winds and 10+ surge: Category 5;	130-156 winds and 8-9 surge: Category 4	111-129 winds and 6-7 surge: Category 3
96-110 winds and 5-6: Category 2	74 - 95 winds and 3-4: Category 1	<74 or less than 1 surge: Tropical Storm