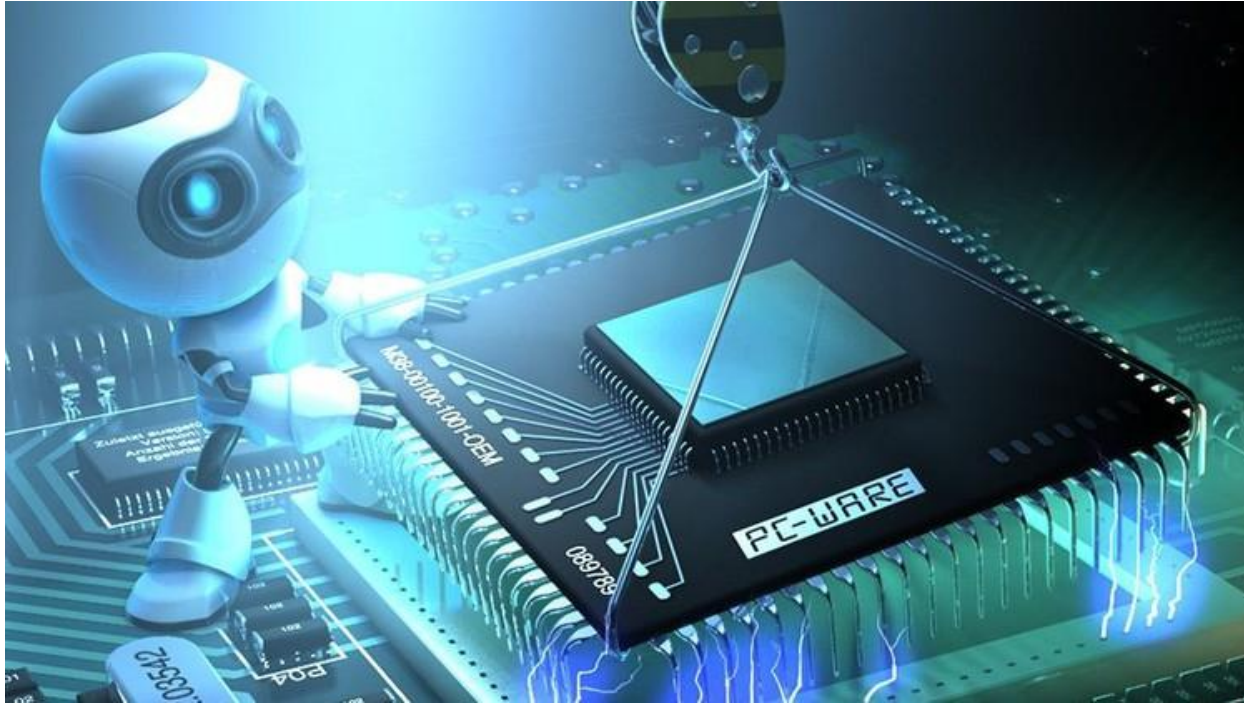# CONDITIONAL statement (IF-THEN-ELSE)

CONDITIONAL statement (IF-THEN-ELSE)

MODEL:

```
if (cond)
    BODY-IF
else
    BODY-ELSE
```

Generic translation:

```
        evaluate condition
        j(fails) else
if:     BODY-IF
        jmp endif
else:   BODY-ELSE
endif:
```

Example:

```
int max(int x, int y) {
  int max;
  if (x>y) max = x;
       else max = y;
  return max;
}
```

Lucas Bazilio - Udemy

CONDITIONAL statement (IF-THEN-ELSE)

Example:

```
int max(int x, int y) {
  int max;
  if (x>y) max = x;
      else max = y;
  return max;
}
```

Translation:

```
max:    pushl %ebp
        movl %esp, %ebp
        subl $4, %esp
        movl 8(%ebp),%ecx
        cmpl 12(%ebp),%ecx
        jle else
if:     movl 8(%ebp),%eax
        jmp endif
else:   movl 12(%ebp),%eax
endif:  movl %ebp, %esp
        popl %ebp
        ret
# x → 8[%ebp]
# y → 12[%ebp]

# result in % eax
```

Lucas Bazilio - Udemy