



Intro to Games

Code Your Story: Session 6

Games

“Playing a game is the voluntary attempt to overcome unnecessary obstacles.”

-Bernard Suits

Rules...

- Keep the game fun
- Keep the game feeling accessible and fair
- Create challenge and therefore inspire creativity

Tic-Tac-Toe

- Draw two horizontal lines and two vertical lines so that they look like a ‘#’ sign; this is the board.
- Designate one player as ‘X’ and another player as ‘O’; player ‘X’ plays first.
- A player’s turn consists of placing their mark (‘X’ or ‘O’) on the board. A player’s mark is valid:
 - If it’s one of the nine spaces on the board divided by lines (not on more than one space, and not outside the board)
 - If there isn’t already a mark in that same space
- Players alternate turns until one player has three marks in a straight line, or the board is full. If a player has three marks in a straight line, they win.

Conditionals

- They allow computer programs to adapt

If (this is happening)

 Then

 (do these steps)

 Else

 (do these other steps)

Conditionals: AND

[original, where the next step in the algorithm isn't clear]

If (it's the start of the game)
 Then find the most hidden,
 furthest spot!

If (it's the start of the game)
 Then find an okay hiding spot
 close to base!

[...an updated version, using AND to make the conditionals clearer]

If (it's the start of the game AND
you want to hide and wait)
 Then find the most hidden,
 furthest spot!

If (it's the start of the game AND
you want to trick the seeker)
 Then find an okay hiding spot
 close to base!

Conditionals: OR

[original, where two different conditional lead to the same step]

If (the seeker has found you)

Then run to base!

If (the seeker is far, far away)

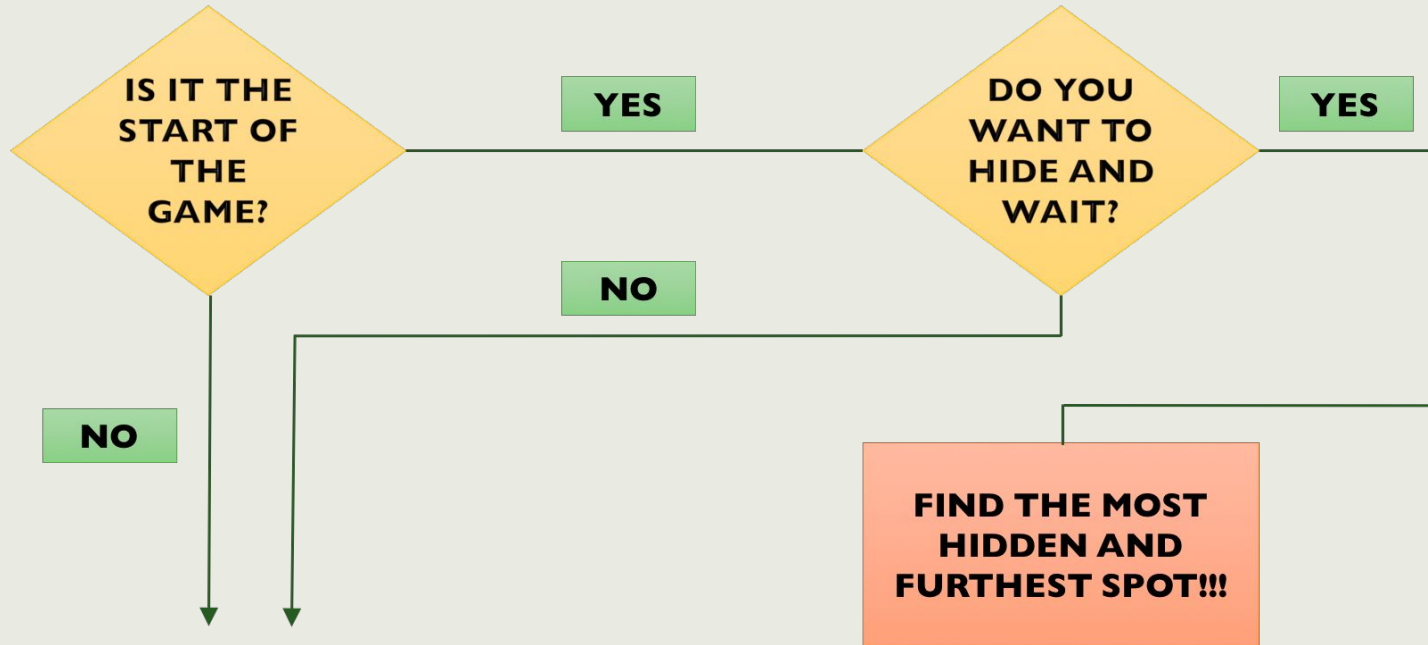
Then run to base!

[...an updated version, using OR to create a more general conditional and cleaner code]

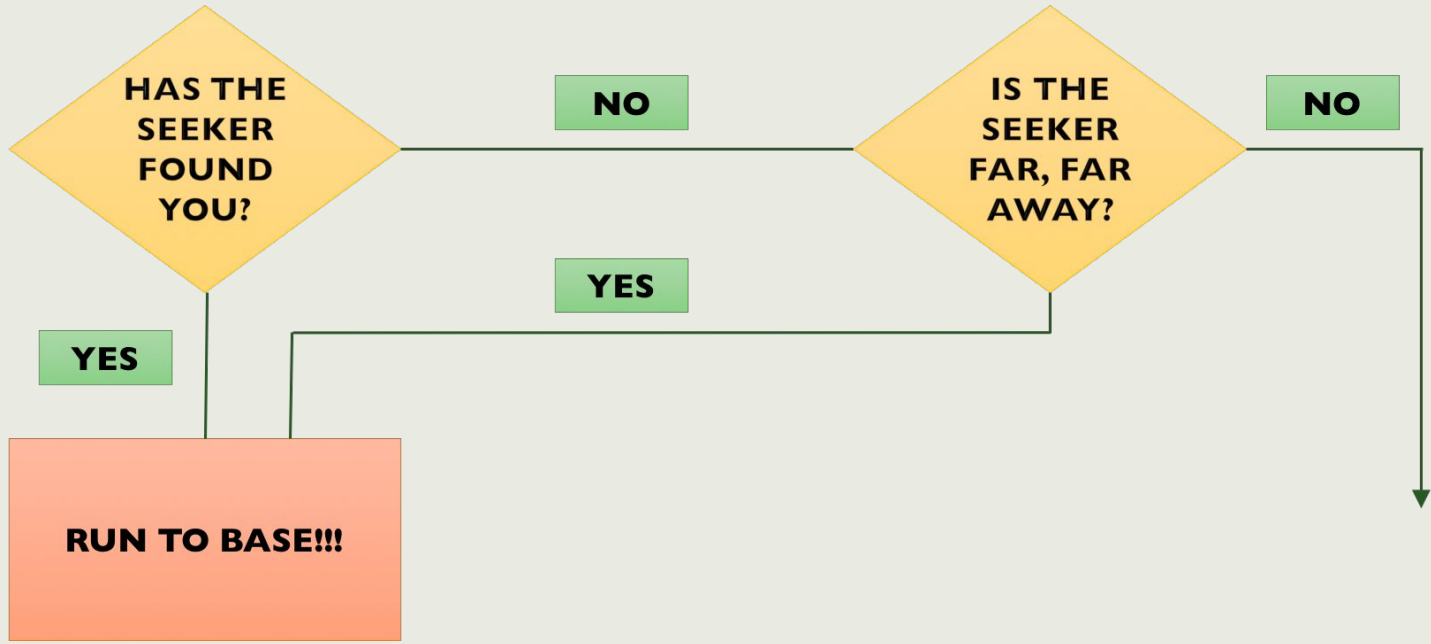
If (the seeker has found you OR the seeker is far, far away)

Run to base!

FLOWCHART: AND



FLOWCHART: OR



Calvinball

- The youngest player/team goes first and makes up one rule
- Students/teams take turns
- On every turn after the first, a student/team writes down an action and a new rule

The goal is to take actions that help you win and to make rules that either give you an advantage or your opponent a disadvantage.