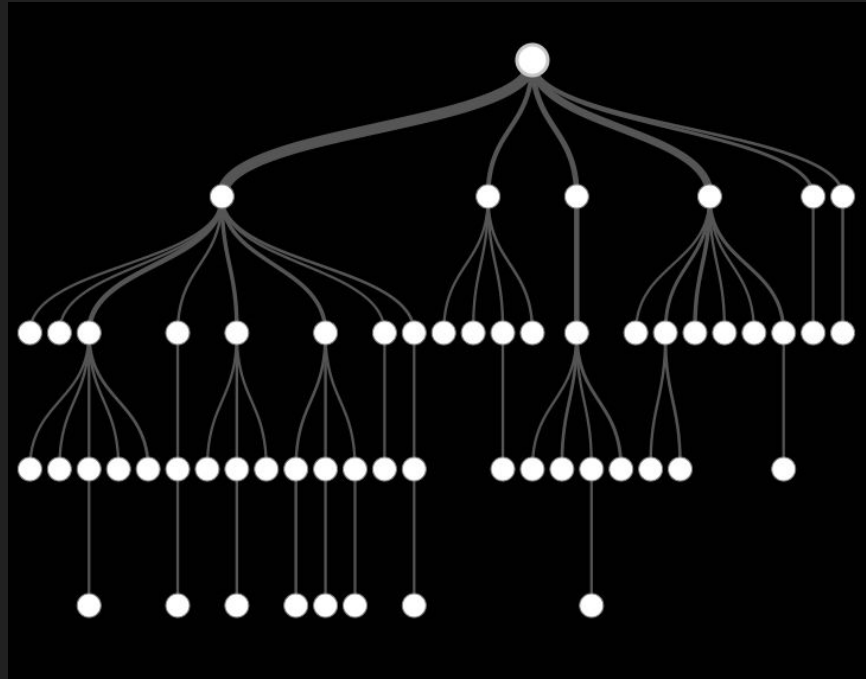


Conditionals

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Control Flow

- Selection
- Making decisions
- Repetition



Let's Practice

You have 45 minutes between classes. How do you decide what to do?

How do we decide what to do?

Booleans!

Flow

So far...Sequential

Now: Decision Flow!

Boolean Operators

- <
- >
- <=
- >=
- ==
- !=

If

Syntax

if <boolean expression>:

<stuff>

<other stuff>

Either <boolean expression> is T or F

Either do <stuff> and <other stuff>

Or just do <other stuff>

If/Else

#you need to get up the stairs

if leg == "working":

stairs.take()

left.turn()

office.enter() #what would happen here?

Else

When your alternative action isn't NOTHING

Syntax

if <boolean expression>:

 <stuff if true>

else:

 <other stuff if false>

<more stuff regardless>

A “Safe” Lead in Basketball

Take the number of points one team is in the lead

Subtract 3

Add a half-point if the team that is ahead has the ball, subtract half-point if the other team has the ball ($<0 \rightarrow 0$)

Square the result

If the result is greater than the number of seconds left in the game, the lead is safe.

#BabySteps

Let's Make a List of Steps

- Get the lead

Take the number of points one team is in the lead

Subtract 3

Add a half-point if the team that is ahead has the ball,
subtract half-point if the other team has the ball ($<0 \rightarrow 0$)

Square the result

If the result is greater than the number of seconds left in the game, the lead is safe.

#BabySteps

Let's Make a List of Steps

- Get the lead
- Subtract 3

Take the number of points one team is in the lead

Subtract 3

Add a half-point if the team that is ahead has the ball,
subtract half-point if the other team has the ball ($<0 \rightarrow 0$)

Square the result

If the result is greater than the number of seconds left in the game, the lead is safe.

#BabySteps

Let's Make a List of Steps

- Get the lead
- Subtract 3
- Who has the ball?
- +/- 0.5

Take the number of points one team is in the lead

Subtract 3

Add a half-point if the team that is ahead has the ball,
subtract half-point if the other team has the ball ($<0 \rightarrow 0$)

Square the result

If the result is greater than the number of seconds left in the game, the lead is safe.

#BabySteps

Let's Make a List of Steps

- Get the lead
- Subtract 3
- Who has the ball?
- +/- 0.5
- Square result

Take the number of points one team is in the lead

Subtract 3

Add a half-point if the team that is ahead has the ball,
subtract half-point if the other team has the ball ($<0 \rightarrow 0$)

Square the result

If the result is greater than the number of seconds left in the game, the lead is safe.

#BabySteps

Let's Make a List of Steps

- Get the lead
- Subtract 3
- Who has the ball?
- +/- 0.5
- Square result
- Get seconds

Take the number of points one team is in the lead

Subtract 3

Add a half-point if the team that is ahead has the ball,
subtract half-point if the other team has the ball ($<0 \rightarrow 0$)

Square the result

If the result is greater than the number of seconds left in the game, the lead is safe.

#BabySteps

Let's Make a List of Steps

- Get the lead
- Subtract 3
- Who has the ball?
- +/- 0.5
- Square result
- Get seconds
- Is the result > seconds left?

Take the number of points one team is in the lead

Subtract 3

Add a half-point if the team that is ahead has the ball,
subtract half-point if the other team has the ball ($<0 \rightarrow 0$)

Square the result

If the result is greater than the number of seconds left in the game, the lead is safe.

#BabySteps

Let's Make a List of Steps

- Get the lead
- Subtract 3
- Who has the ball?
- +/- 0.5
- Square result
- Get seconds
- Is the result > seconds left?
- Print result

Take the number of points one team is in the lead

Subtract 3

Add a half-point if the team that is ahead has the ball,
subtract half-point if the other team has the ball ($<0 \rightarrow 0$)

Square the result

If the result is greater than the number of seconds left in the game, the lead is safe.

#BabySteps