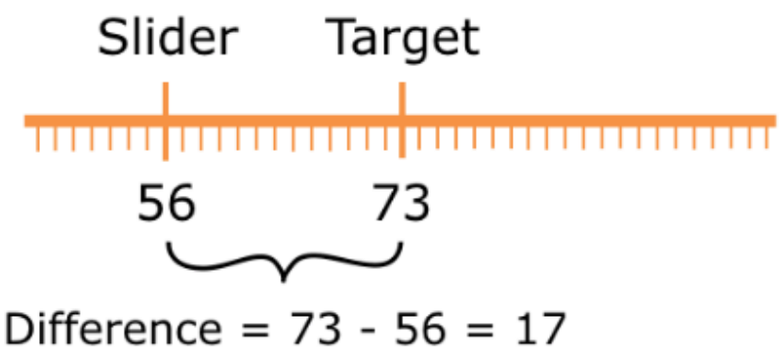
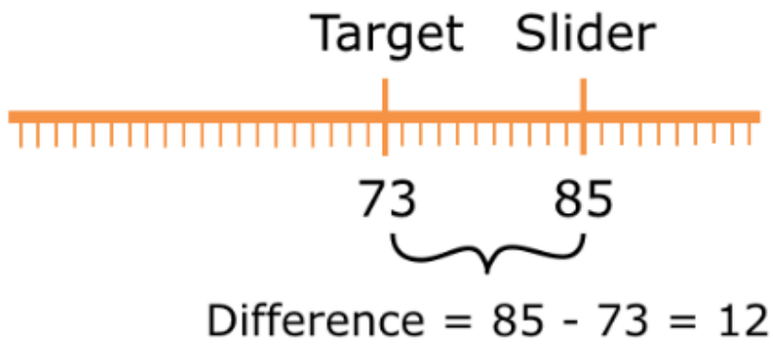
MY FIRST iOS APP
(PART 4) - Rounds & Score

Prepared by Farhaj Ahmed

HOW TO CALCULATE SCORE FOR EACH ROUND?

To calculate the score for each round, you look at how far off the slider's value is from the target:





Calculating the difference between the slider position and the target value

HOW TO CALCULATE SCORE FOR EACH ROUND?

- *If the slider's value is greater than the target value, then the difference is: slider value minus the target value.*
- *However, if the target value is greater than the slider value, then the difference is: target value minus the slider value.*
- *Otherwise, both values must be equal, and the difference is zero.*

```
var difference: Int
if currentValue > targetValue {
  difference = currentValue - targetValue
} else if targetValue > currentValue {
  difference = targetValue - currentValue
} else {
  difference = 0
}
```

The `if` construct is new. It allows your code to make decisions, and it works much like you would expect:

```
if something is true {
  then do this
} else if something else is true {
  then do that instead
} else {
  do something when neither of the above are true
}
```

HOW TO CALCULATE SCORE FOR EACH ROUND?

ANOTHER APPROACH

The new algorithm goes like this:

1. *Subtract the target value from the slider's value.*
2. *If the result is a negative number, then multiply it by -1 to make it a positive number.*

You should have arrived at something like this:

```
var difference = currentValue - targetValue
if difference < 0 {
  difference = difference * -1
}
```

This is a pretty straightforward translation of the new algorithm.

HOW TO CALCULATE SCORE FOR EACH ROUND?

THE SIMPLEST APPROACH

"Programs must be written for people to read"

— Gerald Jay Sussman and Hal Abelson, Authors of "Structure and Interpretation of Computer Programs"

```
let difference = abs(targetValue - currentValue)
```

ENOUGH TALK, LET'S JUMP TO <CODE/>

YOU CAN FIND THIS iOS APP's SOURCE CODE, LECTURE SLIDE AND MY FIRST iOS APP PART 4 INSTRUCTION GUIDE PDF in the description of my YouTube Channel.

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farhaj.ahmed@live.com

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