Pseudocode and Flowcharts

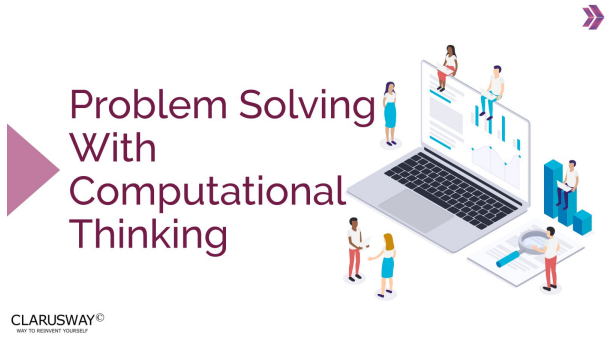
03212020-Computational Thinking
Training Clarusway
Pear Deck - March 21, 2020 at 10:36AM

Part 1 - Summary

Use this space to summarize your thoughts on the lesson

Part 2 - Responses

Slide 1



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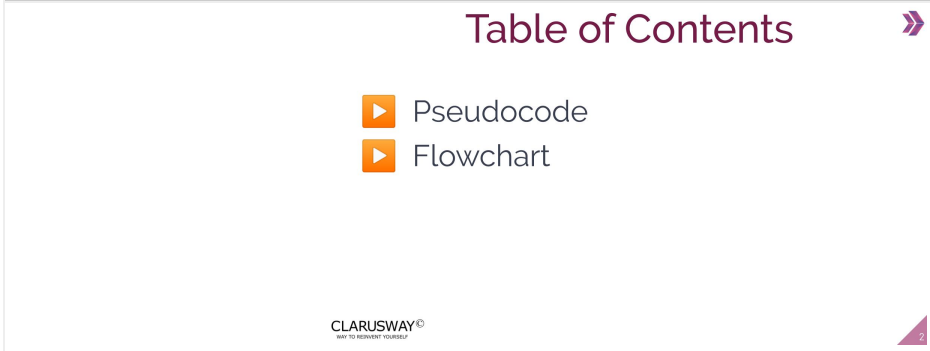

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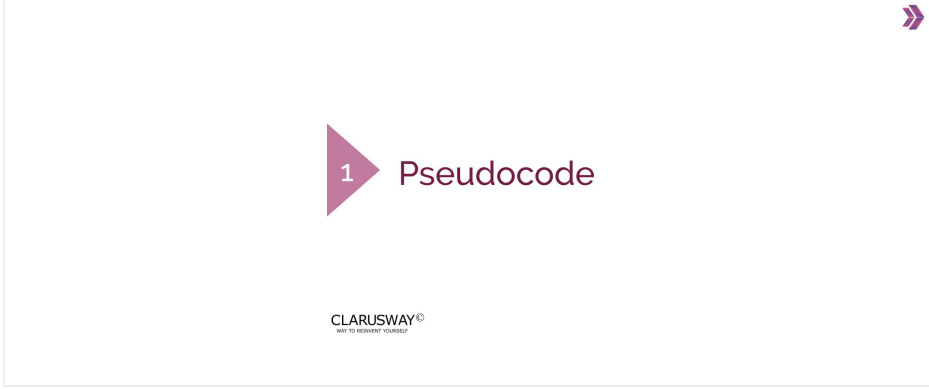

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Slide 4

Pseudocode

Let's discuss and try to predict what does pseudocode mean!

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Slide 5

Pseudocode

- Pseudocodes are one of two popular ways to represent an algorithm.
- Pseudocode is an informal way of representing a computer program or an algorithm.
- It looks like a programming language though, it should be written in a programming language for it to be executed. It's language-agnostic.
- Writing pseudocode is basically writing what you want your programm to do in English.
- Aims to mimic the general style of a programming language

```
OUTPUT 'What is your name?'
INPUT user inputs their name
STORE the user's input in the name variable
OUTPUT 'Hello' + name
OUTPUT 'How old are you?'
INPUT user inputs their age
STORE the user's input in the age variable
IF age >= 70 THEN
    OUTPUT 'You are aged to perfection!'
ELSE
    OUTPUT 'You are a spring chicken!'
```

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Slide 6

Pseudocode

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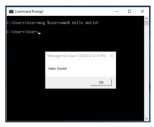

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Slide 7

Pseudocode

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Slide 8

Pseudocode

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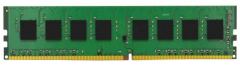

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Slide 9

Keyword

There are these keywords that are widely used, you can use your own keywords, but these are the most frequently used amongst other computer programmers and should not be used as variable names.

```
START, BEGIN: This is the start of your pseudocode.
INPUT: This is data retrieved from the user through the input device.
READ, GET: This is used when reading data from a data file.
PRINT, DISPLAY, SHOW, OUTPUT: This will show your output to a screen.
COMPUTE, CALCULATE: To calculate the result of the expression.
SET, INIT: To initialize values
INCREMENT, BUMP: To increase the value of a variable
DECREMENT: To reduce the value of a variable
END: This is the end of your pseudocode
```

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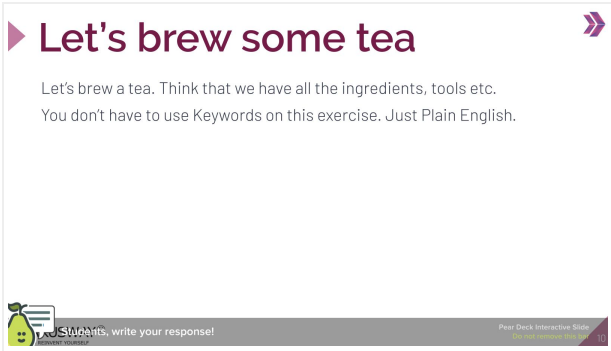
Slide 10	Your Response
	Answer 1: take tea pot put water in bottom part open owen put tea pot on owen when water boiled put a tea on up part of teapot and



add boiled water on up part add more water bottom part of teapot wait 20 mins for brewing and put tea from up part of tea pot into the teacup until half full add water the rest of teacup and drink

Answer 2:
shortcut put water keetle when it boiled put water in to the glass put fat tea

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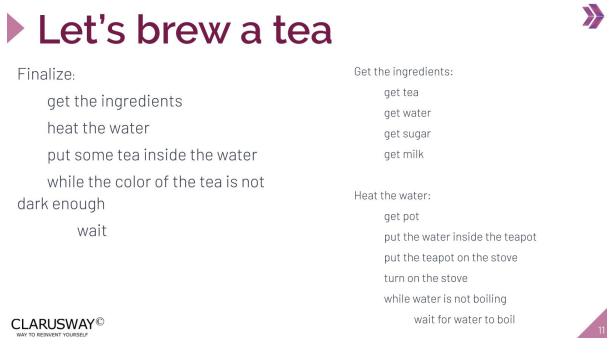
Slide 11



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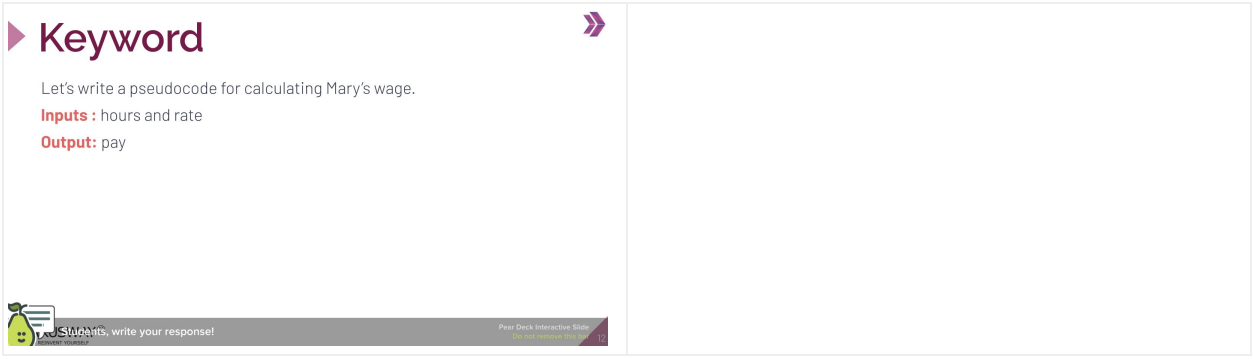
Slide 12	Your Response
	Answer 1: start input how many hours did she work input what is working rate for per hour calculate hours*rate output Marr's wage end



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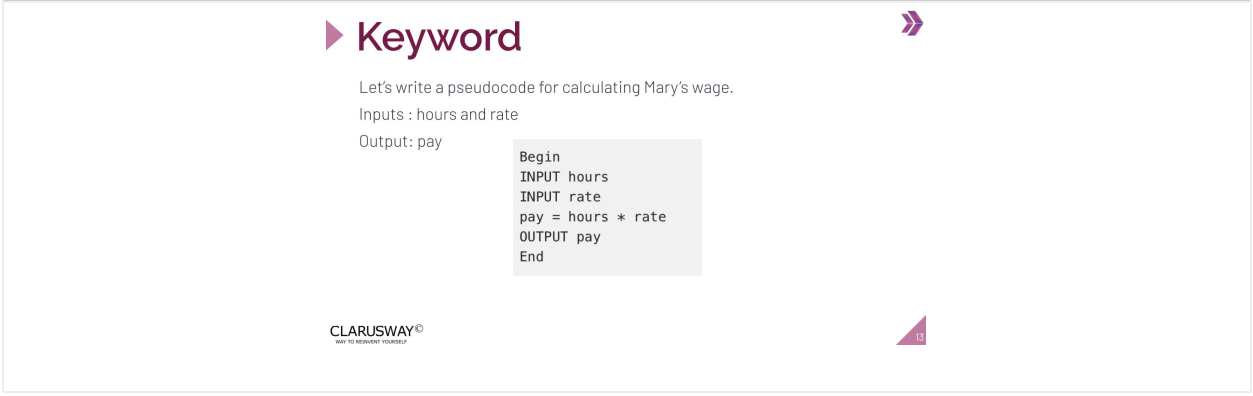

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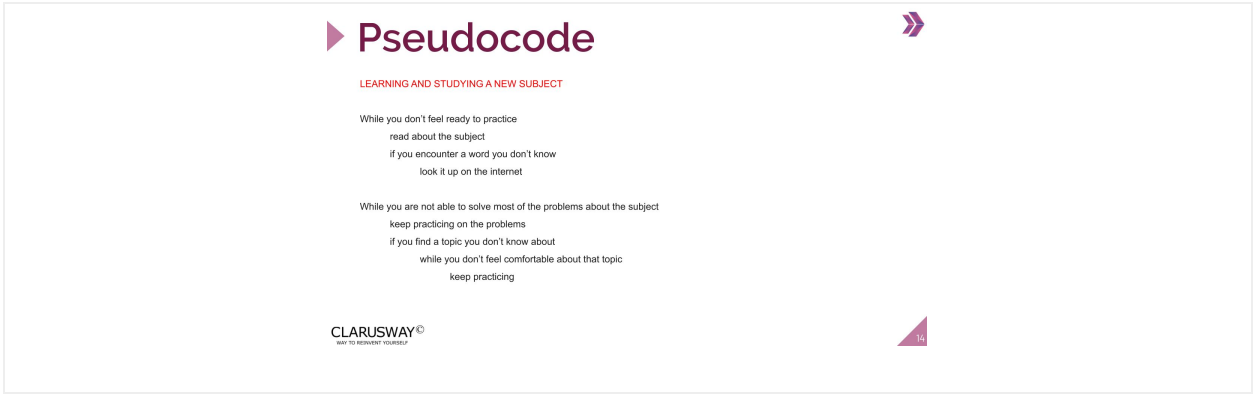

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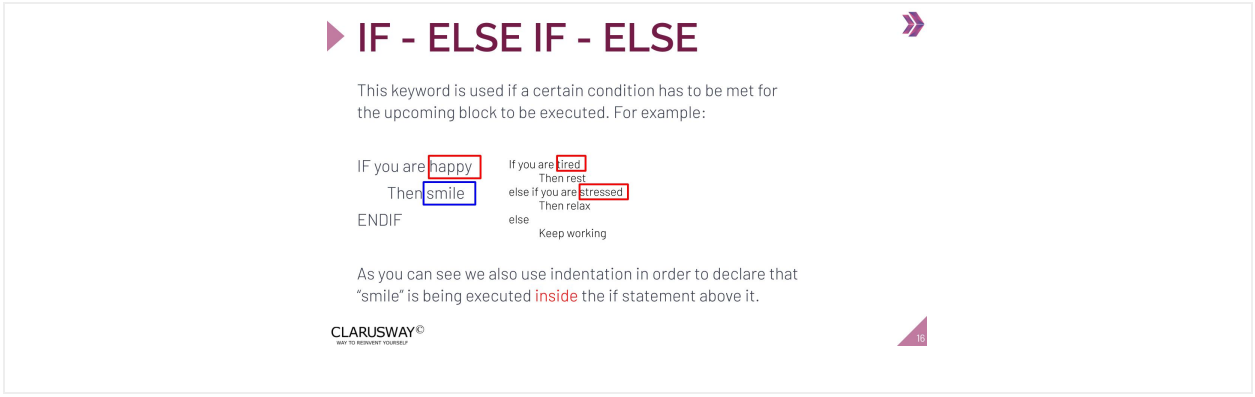
Slide 16



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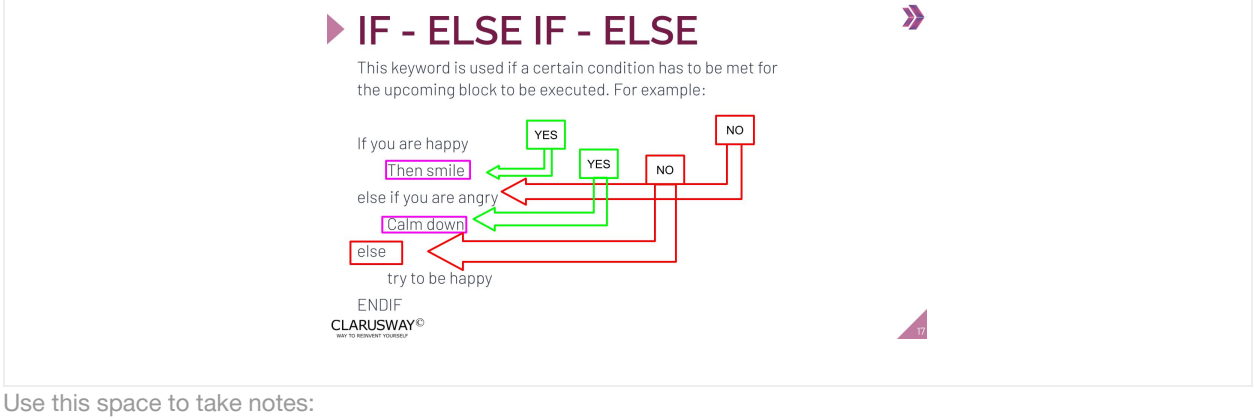

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Slide 18

IF - ELSE IF - ELSE

```
Begin
INPUT hours, rate
IF hours < 40
THEN
    pay = hours * rate
ELSE
    pay = 40 * rate + (hours - 40) * rate *1.5
OUTPUT pay
End
```


Use this space to take notes:

Slide 19

FOR structure

For loop runs for each element inside a group. For example:

```
For every day of the week
    Count;
endfor
```


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Slide 20

FOR structure

For loop runs for each element inside a group.
For example:

For every 25 minutes of study
    Earn one Pomodoro;
endfor

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WHILE Structure

While is similar to the for loop, differently it runs the loop until the condition provided is unsatisfied. Example:

Apples = 5
Oranges = 10
While apples < oranges
    increase apples;
endwhile

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Slide 22

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Slide 23

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Slide 24	Your Response

Exercise

Write a pseudocode that takes a number as an input and prints true if it is greater than 10 and false otherwise.

Students, write your response!

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Slide 25

Exercise

```
read num
if num > 10
    print true
else
    print false
```

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Slide 26

2 Flowcharts

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Flowcharts

Let's discuss and try to predict what does flowchart mean!

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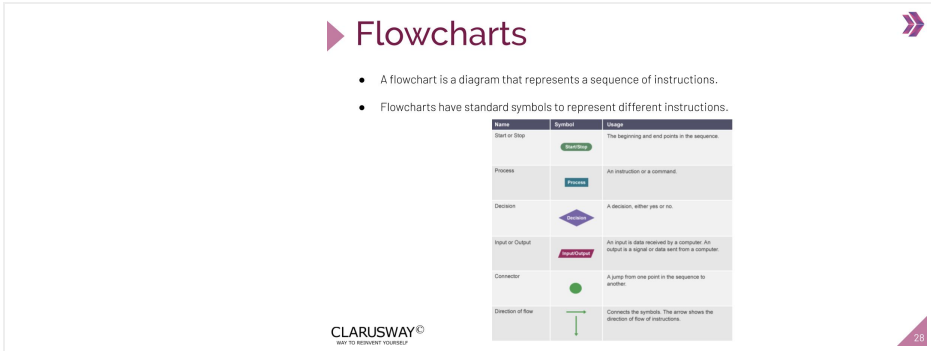

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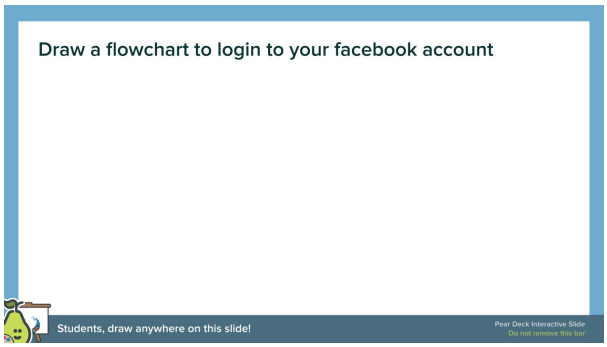
Slide 29	Your Response
	

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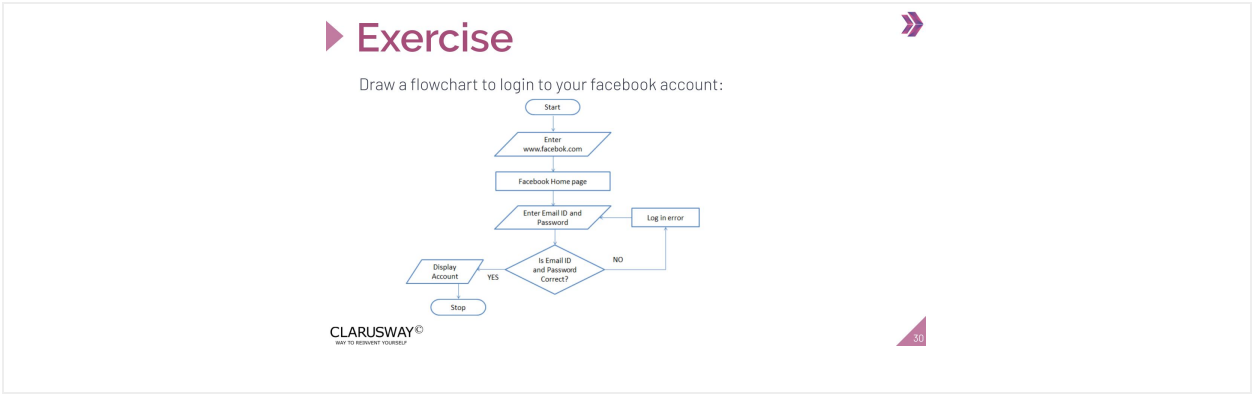

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Slide 31	Your Response
Bank of America has launched a promotion for its credit card customers. According to the promotion, the customers will receive a gift voucher worth $500 with their monthly bill if they spend $15,000 more than their last month spending and their last month bill is not less than $10,000. Students, draw anywhere on this slide! Pear Deck Interactive Slide Do not remove this bar	

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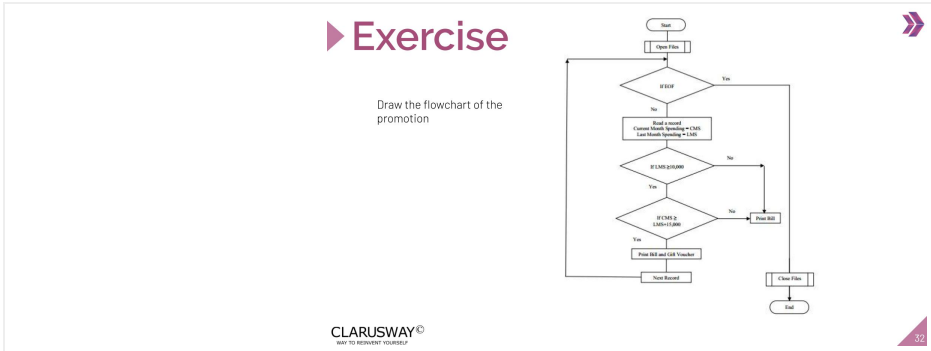

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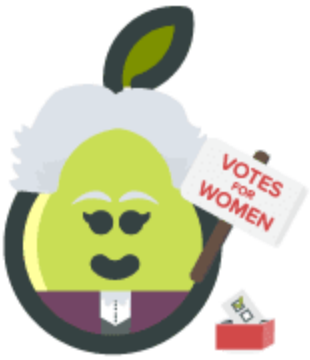
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