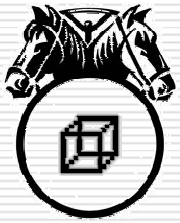
The Quantsters

VBA for Excel with Financial Applications – an Introduction

By Varun Dube



$$x^{2x^{2x^{2x^{2x^{2x^{2x^{2x^{2x^{2x^{2x^{\cdots}}}}}}}}}}} = 2$$

Puzzle_of_the_Day...

Solve_for_x

Outline for Today

- Varun's thoughts on Programming
- Excel's Uses
- Intro to the Interface
- "Goodbye Cruel World…"
- Color-Changing + Formatting
- Statistics – Box Plot
- Simple Moving Average
  - With Live Data Pull!

Intro to Programming

- A means to do…what?
- Let's just do something cool
  - JS (cool web ding things)
  - Video Games – Carmack and Wozniak

What is software used for??

- Statistics
- Databases
- Finance
- Calculator
- Graphical Display (Models)
- Other Organization
- Storage
- More…

Intro to the Interface

- Go To Excel
  - Medium Security
  - Show Tools→Macro
    - ALT + T, M
  - VBA Editor
    - ALT + F11
  - Toolbar – ControlBox

New

ALT+F11

ALT T,M

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"Goodbye Cruel World…"

- Your first Macro
  - Click on a button
  - Button executes a command
  - Command makes a msgbox() pop up and say something.
  - End

New

- Msgbox
- i counter
- Buttons
- Properties
- Private()
- Public()
- Dim

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Color Changing

- Ask: "What do I want?"
  - Box to change color
  - Which Color?
    - Based on R, G, and B
    - How? Input-Text? No
      - Scrollbars
- So we want some scrollbars to change interior color of box and easily give values of the color in RGB and Hex.

New

- Function()
- TextBox
- ScrollBars
- Linking
- onChange
- RGB
- Hex
- Strings
- Range()

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Statistics – Box Plot

- Ask: "What do I want?"
  - Have a bunch of data
  - If I select it and push a button, I will get the table output and a chart
  - Do we want a color Input?
    - Improv this one, Varun.

New

- Chart
- Range
- Formulas
- Functions
- InputBox
- More Formattin

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Live Data Pull

- Yahoo Web Query to get Historical Prices
  - Button to execute
  - Symbol input
- What to do with them?
  - Be creative!
  - Data Sheet + Chart Sheet?

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Closing Thoughts

- Programming is a Frame of Mind
  - Think in If…Then's or Do…While's, its fun
- Help you with boring tasks
  - Data sorting, data manipulation, organization, etc…
- You increase your value many, many times over if you know it! (IBs)
- Creativity is user-defined; don't feel bad about being a nerd ☺

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Reminders

- 03/30 – AKP/QFS/IAG Trip to UBS
- 04/03 – Photios, Ph.D speaker event
- 04/10 – Vishal Shah Fundamental Analysis
- 04/17 – Dr. Bob, Ph.D speaker event
- 04/24 – QFS DVD / Member-only EoY Party

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Math Puzzle Solution

$$x^{2x^{2x^{2x^{2x^{\cdots}}}}} = 2$$

Even if we take out one $2x$, the tower will be the same value!

$$2x^{2x^{2x^4}} \rightarrow 2x^{2x^4} \rightarrow 2x^4 \rightarrow 4 = 4$$

We'll take, $x^4 = 2$

$$x = \sqrt[4]{2}$$

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