For each of the fields for our objects, the doubles will measure as follows:

// all prices and values will be pulled from closing prices as of 5/28/21 or 6/1/2011 for ten year averages

*Price (double):* Measures actual price $

*Change (double):* Measures change in price as %. Not really used anywhere, just used in the holding information menu.

// change is calculated from closing price as of 4/28/21 and 5/28/21

*Dividend (double):* Measures dividend as % of price

*MortgageSim(double):* Measures % **decrease** when the simulator is ran (unless otherwise specified), will be used to find change in $ value

// change is calculated from closing price as of September 29th and October 27th 2008

*COVIDSim(double):* Measures % **decrease** when the simulator is ran (unless otherwise specified), will be used to find change in $ value

// change is calculated from closing price as of February 21st and March 23rd 2020

*TenYear(double):* Measures change in price as %, will be used to find change in $ value (most will likely be over 100%)

*TwentyYear(double):* Measures change in price as %, will be used to find change in $ value (most will likely be over 100%)

I added in some tables to illustrate what kind of outputs we should be getting from each one of the holdings after running the simulations. The letters represent which simulation is being run, the “inputs” I put in are just the price per share/item as an example, Div & Years is dividend yield/years input. The output % has + or – next to the values just to clarify if value is going up or down based on the simulation. Most of the outputs are the ending price of something after a simulation, some of the outputs are the amount gained after a simulation.

* A Dividend simulator
* B Mortgage Crisis simulator
* C COVID19 simulator
* D Ten year growth simulator
* E Twenty year growth simulator

EQUITIES:

**GSPC, S&P 500 –**

Name (String): GSPC, S&P 500

Price (double): 4204.11

Change (double): 0.55

Dividend (double): 1.38

MortgageSim(double): 30.03

COVIDSim(double): 32.96

TenYear(double): 136

TwentyYear(double): 272

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Simulations | Inputs | Div & years | Output % | Output $ |
| A | 4204.11 | 1.38/10 | +1.38 | 617.55 |
| B | 4204.11 |  | -30.03 | 2941.61 |
| C | 4204.11 |  | -32.96 | 2818.43 |
| D | 4204.11 |  | +136 | 9921.7 |
| E | 4204.11 |  | +272 | 15639.3 |

**DJI, Dow Jones Industrial Average -**

Name (String): DJI, Dow Jones Industrial Average

Price (double): 34529.45

Change (double): 2.1

Dividend (double): 2.24

MortgageSim(double): 19.16

COVIDSim(double): 33.86

TenYear(double): 150.3

TwentyYear(double): 300.6

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Simulations | Inputs | Div & years | Output % | Output $ |
| A | 34529.45 | 2.24/10 | +2.24 | 8562.69 |
| B | 34529.45 |  | -19.16 | 6615.85 |
| C | 34529.45 |  | -33.86 | 11691.67 |
| D | 34529.45 |  | +150.3 | 86427.2 |
| E | 34529.45 |  | +300.6 | 138325 |

**NASDAQ, IXIC –**

Name (String): NASDAQ, IXIC

Price (double): 13748.74

Change (double): - 2.2

Dividend (double): 1.17

MortgageSim(double): 24.08

COVIDSim(double): 28.16

TenYear(double): 118.05

TwentyYear(double): 236.1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Simulations | Inputs | Div & years | Output % | Output $ |
| A | 13748.74 | 1.17/10 | +1.17 | 1695.99 |
| B | 13748.74 |  | -24.08 | 10438.04 |
| C | 13748.74 |  | -28.16 | 9877.1 |
| D | 13748.74 |  | +118.05 | 29979.1 |
| E | 13748.74 |  | +236.1 | 46209.5 |

**Amazon.com, AMZN –**

Name (String): Amazon.com, AMZN

Price (double): 3223.07

Change (double): negative 6.8

Dividend (double): 0

MortgageSim(double): 21.73

COVIDSim(double): 11.92

TenYear(double): 1476.15

TwentyYear(double): 2952.3

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Simulations | Inputs | Div & years | Output % | Output $ |
| A | 3223.07 | 0/10 | 0 | 0 |
| B | 3223.07 |  | -21.73 | 2522.69 |
| C | 3223.07 |  | -11.92 | 2838.88 |
| D | 3223.07 |  | 1476.15 | 50800.4 |
| E | 3223.07 |  | 2952.3 | 98377.8 |

**Boeing, BA –**

Name (String): Boeing, BA

Price (double): 247.47

Change (double): 1.8

Dividend (double): 0

MortgageSim(double): 13.11

COVIDSim(double): 71.22

TenYear(double): 234.12

TwentyYear(double): 468.25

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Simulations | Inputs | Div & years | Output % | Output $ |
| A | 247.47 | 0/10 | 0 | 0 |
| B | 247.47 |  | -13.11 | 215.02 |
| C | 247.47 |  | -71.22 | 71.22 |
| D | 247.47 |  | +234.12 | 826.84 |
| E | 247.47 |  | +468.25 | 1406.24 |

**Exxon Mobil, XOM -**

Name (String): Exxon Mobil, XOM

Price (double): 58.37

Change (double): 0.4

Dividend (double): 5.94

MortgageSim(double): 10.76

COVIDSim(double): 44.63

TenYear(double): negative 28.27

TwentyYear(double): negative 56.54

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Simulations | Inputs | Div & years | Output % | Output $ |
| A | 58.37 | 5.94/10 | +5.94 | 45.57 |
| B | 58.37 |  | -10.76 | 52.08 |
| C | 58.37 |  | -44.63 | 32.31 |
| D | 58.37 |  | -28.27 | 41.86 |
| E | 58.37 |  | -56.54 | 25.36 |

BONDS AND PROPERTY:

**Vanguard Intermediate Term Bond Index, VICSX –**

Name (String): Vanguard Intermediate Term Bond Index, VICSX

Price (double): 3000

Change (double): 0.04

Dividend (double): 2.6

MortgageSim(double): 11.47

COVIDSim(double): 11.74

TenYear(double): 18.03

TwentyYear(double): 36.07

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Simulations | Inputs | Div & years | Output % | Output $ |
| A | 3000 | 2.6/10 | +2.6 | 877.88 |
| B | 3000 |  | -11.47 | 2655.9 |
| C | 3000 |  | -11.74 | 2647.8 |
| D | 3000 |  | +18.03 | 3540.9 |
| E | 3000 |  | +36.07 | 4082.1 |

**Delaware Extended Duration Bond Fund Class C, DEECX –**

Name (String): Delaware Extended Duration Bond Fund Class C, DEECX

Price (double): 3000

Change (double): 0.02

Dividend (double): 6.6

MortgageSim(double): 11.47

COVIDSim(double): 19.45

TenYear(double): 9.07

TwentyYear(double): 18.15

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Simulations | Inputs | Div & years | Output % | Output $ |
| A | 3000 | 6.6/10 | +6.6 | 2684.51 |
| B | 3000 |  | -11.47 | 2655.9 |
| C | 3000 |  | -19.45 | 2416.5 |
| D | 3000 |  | +9.07 | 3272.1 |
| E | 3000 |  | +18.15 | 3544.5 |

**Medium suburban house –**

Name (String): Medium suburban house

Price (double): 100000

Change (double): 0.3

Dividend (double): 0

MortgageSim(double): decrease 16

COVIDSim(double): increase 10

TenYear(double): 38

TwentyYear(double): 76

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Simulations | Inputs | Div & years | Output % | Output $ |
| A | 100000 | 0/10 | 0 | 0 |
| B | 100000 |  | -16 | 16000 |
| C | 100000 |  | +10 | 10000 |
| D | 100000 |  | +38 | 38000 |
| E | 100000 |  | +76 | 76000 |

**Large suburban house –**

Name (String): Large suburban house

Price (double): 250000

Change (double): 0.3

Dividend (double): 0

MortgageSim(double): decrease 16

COVIDSim(double): increase 10

TenYear(double): 38

TwentyYear(double): 76

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Simulations | Inputs | Div & years | Output % | Output $ |
| A | 250000 | 0/10 | 0 | 0 |
| B | 250000 |  | -16 | 40000 |
| C | 250000 |  | +10 | 25000 |
| D | 250000 |  | +38 | 95000 |
| E | 250000 |  | +76 | 190000 |

**Plot of land outside the city –**

Name (String): Plot of land outside the city

Price (double): 25000

Change (double): 0.3

Dividend (double): 0

MortgageSim(double): decrease 16

COVIDSim(double): increase 10

TenYear(double): 38

TwentyYear(double): 76

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Simulations | Inputs | Div & years | Output % | Output $ |
| A | 25000 | 0/10 | 0 | 0 |
| B | 25000 |  | -16 | 4000 |
| C | 25000 |  | +10 | 2500 |
| D | 25000 |  | +38 | 9500 |
| E | 25000 |  | +76 | 19000 |

**Plot of land in the city –**

Name (String): Plot of land in the city

Price (double): 50000

Change (double): 0.3

Dividend (double): 0

MortgageSim(double): decrease 16

COVIDSim(double): increase 10

TenYear(double): 38

TwentyYear(double): 76

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Simulations | Inputs | Div & years | Output % | Output $ |
| A | 50000 | 0/10 | 0 | 0 |
| B | 50000 |  | -16 | 8000 |
| C | 50000 |  | +10 | 5000 |
| D | 50000 |  | +38 | 19000 |
| E | 50000 |  | +76 | 38000 |

**Doge -**

Name (String): Doge

Price (double): 420.69

Change (double): 10

Dividend (double): 6.9

MortgageSim(double): 98

COVIDSim(double): 99

TenYear(double): 420

TwentyYear(double): 840

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Simulations | Inputs | Div & years | Output % | Output $ |
| A | 420.69 | 6.9/10 | +6.9 | 819.85 |
| B | 420.69 |  | -98 | 8.41 |
| C | 420.69 |  | -99 | 4.2 |
| D | 420.69 |  | +420 | 2187.59 |
| E | 420.69 |  | +840 | 3954.48 |