**ICS2O Culminating Project**

William Fairgrieve

**Program Description**

My program is a utility program. These are the current utilities:

* A slope calculator
* A temperature converter
* A Trigonometry function calculator
* A CD drive controller
* A quadratic function solver

­­**IPO Table**

|  |  |  |
| --- | --- | --- |
| **Input** | **Processing** | **Output** |
| Slope Calculator:  Coordinates | Slope = Δy / Δx | Slope |
| Temperature:  Celsius OR Fahrenheit OR Kelvin | If c entered and others =0 Then  K = c + 273.15  F = c + 9/5 + 32  ElseIf F entered and others =0 Then  C = (F – 32) x 5/9  K = C + 273.15  ElseIf K entered and others =0 Then  C = k – 273.15  F = c + 9/5 + 32  Else  Display invalid input label  End If | The two other calculated values |
| Trig Functions:  Angle AND degrees OR radians AND buttons | If degrees selected Then  Calculate radians from degrees  End If  When sine clicked Then  Output sin of input  When cosine clicked Then  Output cos of input  When tangent clicked Then  Output tan of input | The calculated sine, cos or tan |
| CD Drive:  Buttons | When open clicked Then  Open cd drive  When close clicked Then  Close CD drive | The CD drive is opened or closed |
| Quadratic Solver:  Coefficients | Calculate discriminate from coefficients  If discriminate < 0 Then  Output “No real roots”  Else  Calculate roots  Output roots  End If | The roots of the equation |