Lab 3: Web Application with Genie

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I. EXERCICES

-In the first task we add extra slide that modify the behaviour of the sine wave graph by adding : *Phase* ranging between $-\pi$ and π , changes by a step of $\frac{\pi}{100}$

• Then we add the offset function : Offset varies from -0.5 to 1, by a step of 0.1

```
👶 app.jl
Web app > ♣ app.jl >
     using GenieFramework
      @genietools
      @app begin
          @in N::Int32 = 1000
          @in amp::Float32 = 0.25
          @in frea::Int32 = 1
          @in ph::Float64 = 3.14/100
          @in offset::Int32 = 0
          @out my_sine = PlotData()
          @onchange N, amp, freq ,ph,offset begin
              x = range(0, 1, length=N)
y = amp*sin.(2*π*freq*x.+ph).+offset
               my_sine = PlotData(x=x,
                                   plot=StipplePlotly.Charts.PLOT_TYPE_LINE)
      @page("/", "app.jl.html")
```

Figure 1: Adding the phase and offset functions

Figure 2: Adding the phase and offset functions

Figure 3: Adding the phase and offset functions

• After that we open the Julia REPL

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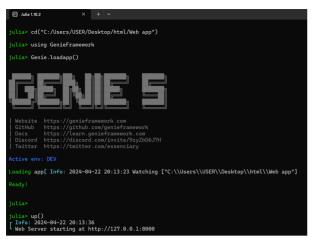


Figure 4: Julia REPL

-And, we have the sine wave, with the ability to adjust every parameter

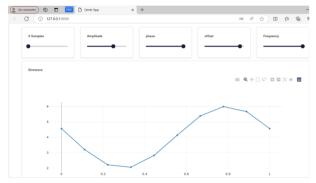


Figure 5: sinmove

II. CONCLUSION

finally, Julia is a dynamic, high-level programming language that has gained significant traction in scientific and technical computing communities.

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