First, have a look at some online documentations for Julia and Nemo; I found them well done.

- [https://docs.julialang.org/en/stable/](https://docs.julialang.org/en/stable/)

I’ll give here a few tips related to what you need to do for your assignments.

- you can define a domain of complex numbers with 100 bits precision, together with the corresponding $i$, and $\pi$, as

  ```julia
  CC = ComplexField(100)
  im = onei(CC)
  pi = const_pi(CC)
  ```

  The exponential of a complex number $z$ is $\exp(z)$

- believe it or not, the degree of a polynomial $f$ is $\text{degree}(f)$

- $\text{evaluate}(f, z)$ computes $f(z)$. useful for debugging your FFT

- vcat concatenates arrays; $\text{append!}(r, s)$ appends $s$ to $r$ (modifying $r$)