

# Instructions for PS1

- 1) **'main.jl'** is the main file that runs all three methods and plots the optimal policy functions.
- 2) **'VFI.jl'** is the file that
  - 2.1) Specify parameters in the model (Model instance).
  - 2.2) Computes steady state level of key variables with nonlinear solver (getSS function).
  - 2.3) Solve  $h$  from static problem using intertemporal condition (geth function). Use 'NewtonRoot.jl' subroutine to solve for root.
  - 2.4) Calculate present value in the Bellman equation, given optimal labor choice (getrt function).
  - 2.5) Iterate on the Bellman equation (VFI function).
- 3) **'LQ\_Vaughan.jl'** is the file that
  - 3.1) Construct important matrices to be used in LQ and Vaughan method, given parameters and steady state variables obtained from 'VFI.jl' (getM function).
  - 3.2) Implement LQ method (LQ function). Use 'Riccati.jl' subroutine to iterate on the Riccati equation.
  - 3.3) Implement Vaughan method (Vaughan function).