* Injection:
  + Maven
  + Spring Annotation

Architecture

* SRC
* Main
  + Resources
  + Java.learn.house
    - App (main)
      * Models:
        + Guests
        + Hosts
        + Reservations
      * Data:
        + DataException
        + HostFileRepository
        + GuestFileRepository
        + ReservationFileRepository
        + HostRepository
        + GuestRepository
        + ReservationRepository
      * Domain
        + GuestService
        + HostService
        + ReservationService
        + Response -?
        + Results
      * UI
        + ConsoleIO
        + Controller
        + MainMenuOptions
        + View
* Testing
  + Java.learn.house
    - Data
      * HostFileRepositoryTest
      * GuestFileRepositoryTest
      * ReservationFileRepositoryTest
      * HostRepositoryDouble
      * GuestRepositoryDouble
      * ReservationRepositoryDouble
    - Domain
      * GuestServiceTest
      * HostServiceTest
      * ReservationServiceTest

Method Outline

* Models:
  + Guests
    - String Id (UUID)
    - String Lastname
    - String email
    - String address
    - String city
    - String state
    - String postal\_code
  + Hosts
    - String Id (UUID)
    - String Lastname
    - String email
    - String address
    - String city
    - String state
    - String postal\_code
    - BigDecimal standard\_rate,
    - BigDecimal weekend\_rate (fri + sat night)
  + Reservations
    - String/int ID (Id per host)
    - LocalDate Startdate
    - LocalDate Enddate
    - String guest\_id
    - BigDecimal totalCost
* Data:
  + DataException
    - Extend Exceptions
    - Construct(String, throw)
  + HostFileRepository
    - FILEPATH
    - List<> findAll()
    - List<> FindByEmail(String)
  + GuestFileRepository
    - FILEPATH
    - List<> findAll()
    - List<> FindByEmail(String)
  + ReservationFileRepository
    - FILEPATH
    - List<> findAll()
    - WriteAll()
    - Serialize() & Deserialize()
  + HostRepository
    - List<> FindAll()
    - List<> FindById()
  + GuestRepository
    - List<> FindAll()
    - List<> FindById()
  + ReservationRepository
    - List<> Findall()
    - Reservation Add(Host, Guest, Start, End)
    - Boolean Update(Reservation)
* Domain:
  + GuestService
    - ValidateGuest(Guest)
    - List<> FindGuests(String ID)
  + HostService
    - List<> FindHost(String ID)
    - ValidateHost(Host)
  + ReservationService
    - Result Add(Reservation)
    - Result Validate(Reservation)
      * ValidateDates
      * ValidateEmails
  + Response
    - ArrayList<Strings> errorMessages
    - AddError(String)
    - List<string> getErrors()
    - Boolean isSuccess()
  + Results
    - Extend response
    - T payload
    - T getPayload()
    - setPayload(T)
* UI:
  + ConsoleIO
    - String readString(String) allow null
    - String RequireString(String) prevent null
    - String PromptForString(String Prompt)
    - Int readInt(String)
    - LocalTime readLocalTime(String)
    - BigDecimal readBigDecimal(String) //min max varient
  + Controller
    - Run()
    - RunLoop() //Holds Switch
    - ViewReservations()
    - CreateReservation()
    - EditReservation()
    - CancelUpcomingReservation()
  + MainMenuOptions (Enum)
    - String Message
    - Int value
    - MenuOption getOptionFromValue(Int)
  + View
    - MenuOption selectOption() //returns MenuOption
    - LocalDate getDate(String)
    - Host getHostFromEmail(String)
    - Guest getGuestFromEmail(String)
    - List<> getReservations(String ID)
    - Reservation SelectReservation()
* Menu Option Breakdown
  + View Reservations for Host (email)
    - Print by date
    - Error if no Reservations
  + Make reservation
    - Ask Host Email, Guest Email,
    - Select host
    - Select guest
    - Show future reservations for host
    - Get Start and End (no overlap)
    - Print Summary
    - Start, End, Cost
    - Confirm
  + Edit reservation
    - Ask Host Email, Guest Email,
    - Show host-guest reservations
    - EDIT START/END, confirm
  + Cancel reservations
    - Ask Host Email, Guest Email,
    - Show future host-guest reservations
    - Show success