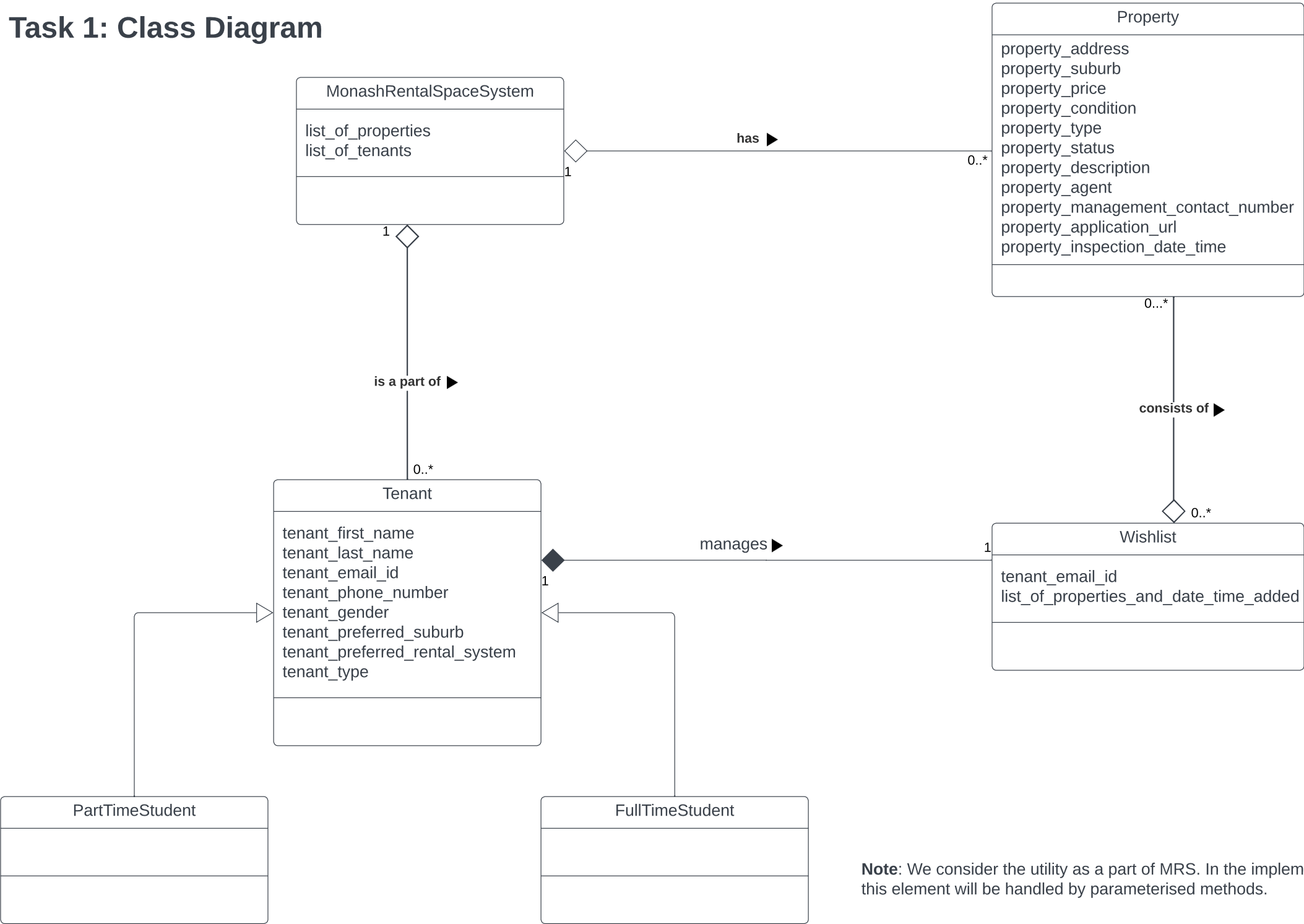
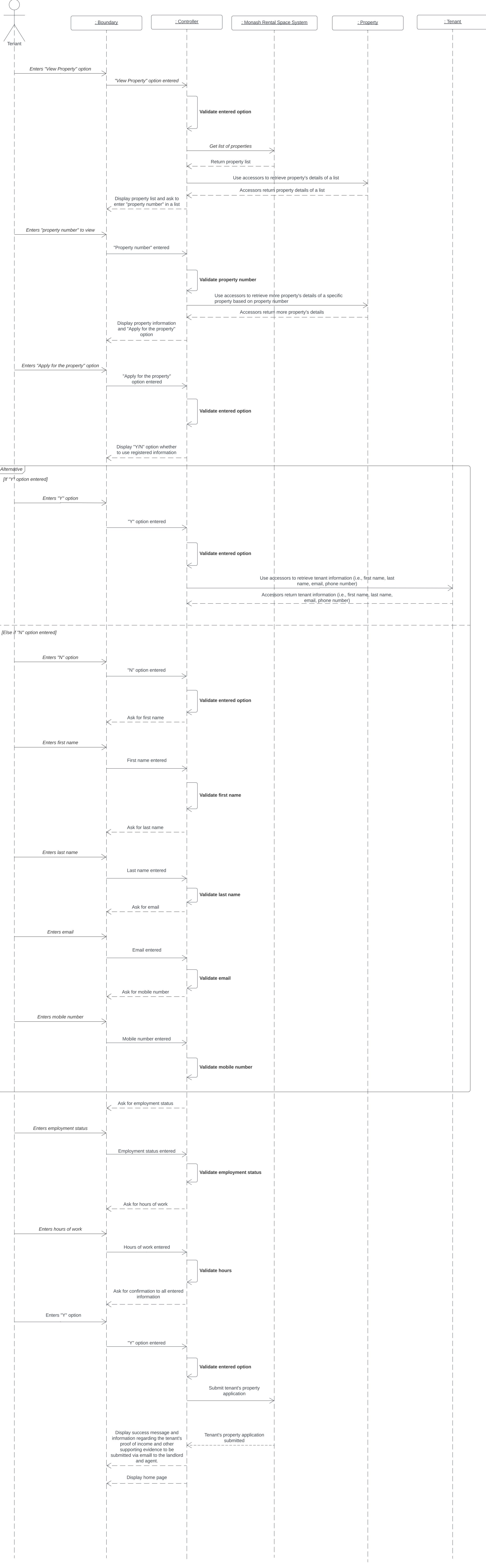


Task 1: Class Diagram



Note: We consider the utility as a part of MRS. In the implementation, this element will be handled by parameterised methods.

Task 2: Sequence Diagram



Task 3: State Diagram

