**Design**

**UML Diagram**

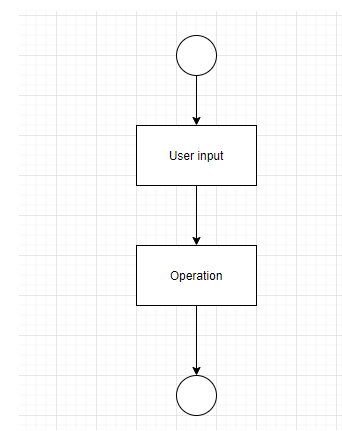


Fig 1. UML Diagram

**Class Diagram**

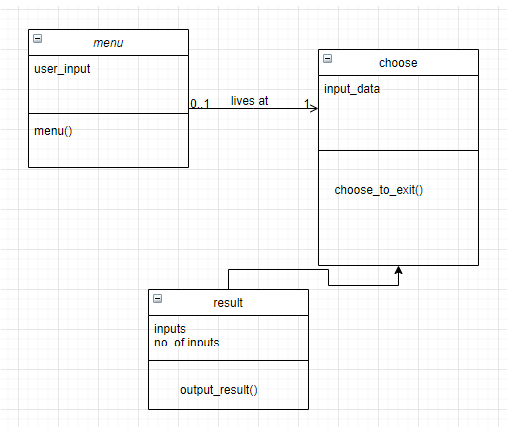


Fig 2. Class Diagram

**State Diagram**

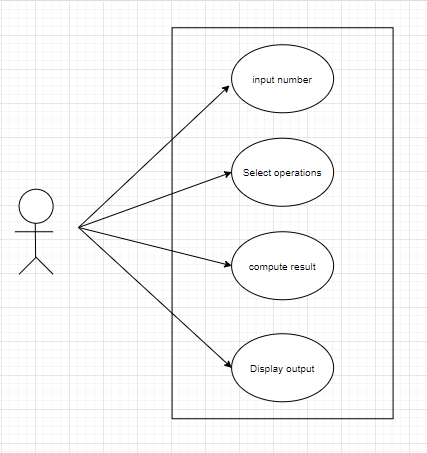


Fig 3. State Diagram

**Activity Diagram**

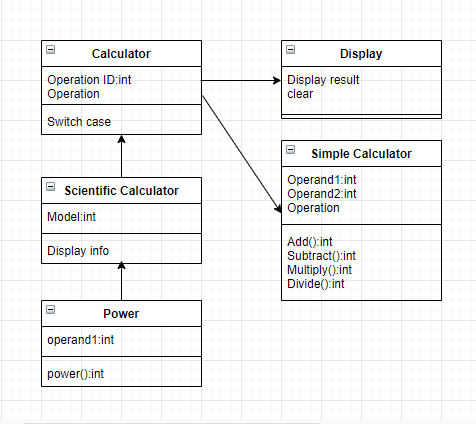


Fig 4. Activity Diagram

**Sequence Diagram**

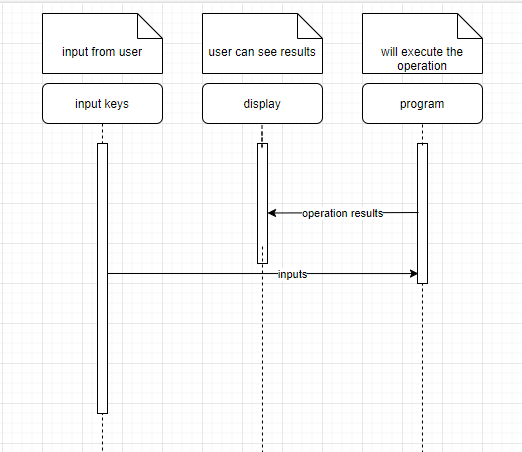


Fig 5. Sequence Diagram

**Flow Chart**

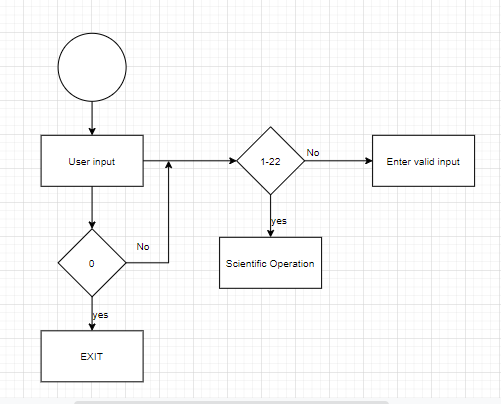


Fig 6. Flow Chart