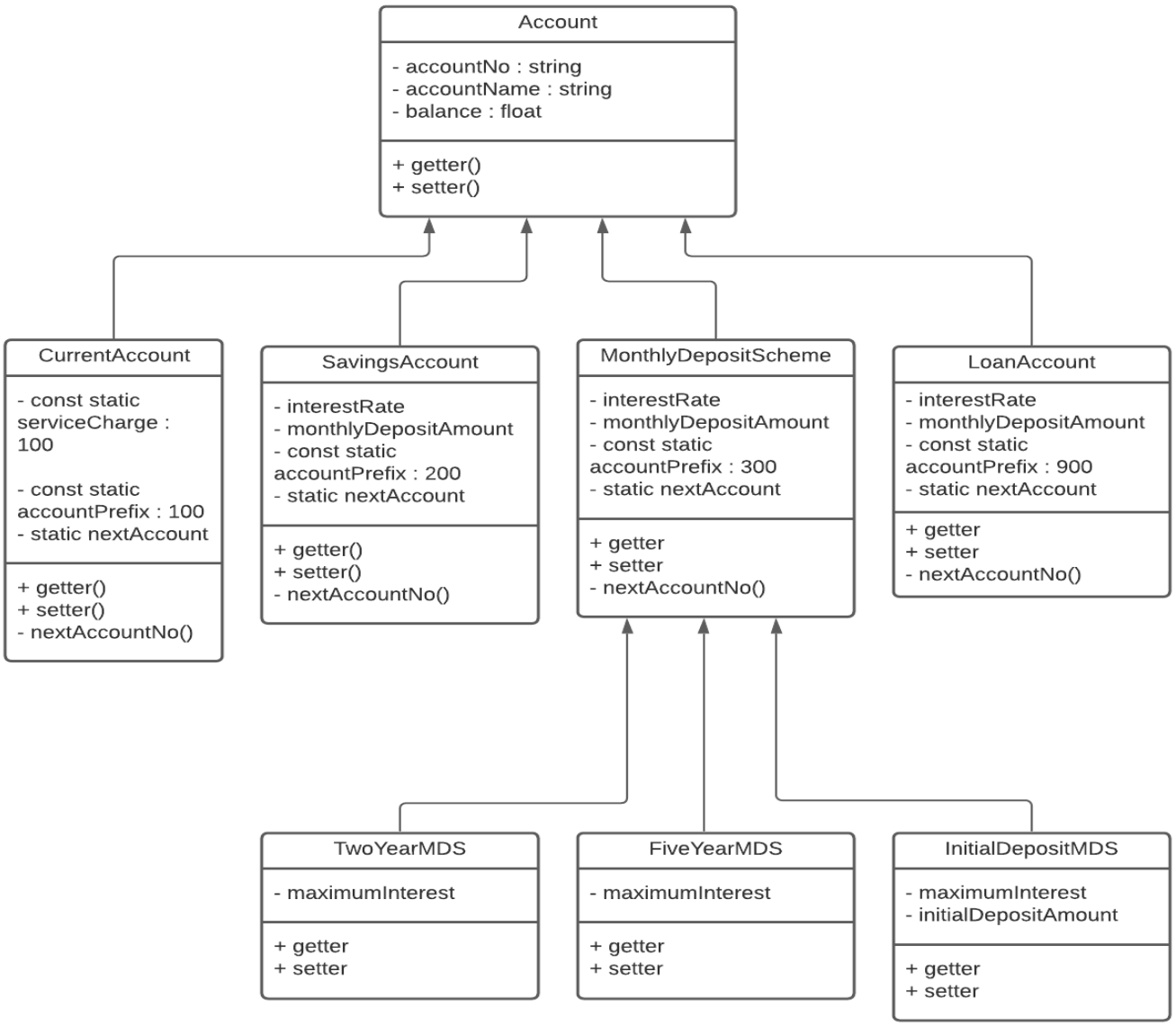
Week 8:Inheritance

Learning Materials: Chapter 9
Topics:

- Derive class,
- Override member functions,
- Use Base class function in Overridden function,
- Which function will be called (base or derived.)
- Type of Inheritance (public, private, protected)
- Multiple inheritance
- Multi Level Inheritance
- Aggregation and Composition

Task 1:

Create classes following the UML diagram below. You can update any member if you feel that it is not right. You can also add more member functions and variables to assist.
Here the user will not give any account number as input. In the constructor account no will be generated in the format <accountPrefix - nextAccountNo>. Update nextAccountNo accordingly. *[Mark 10]*



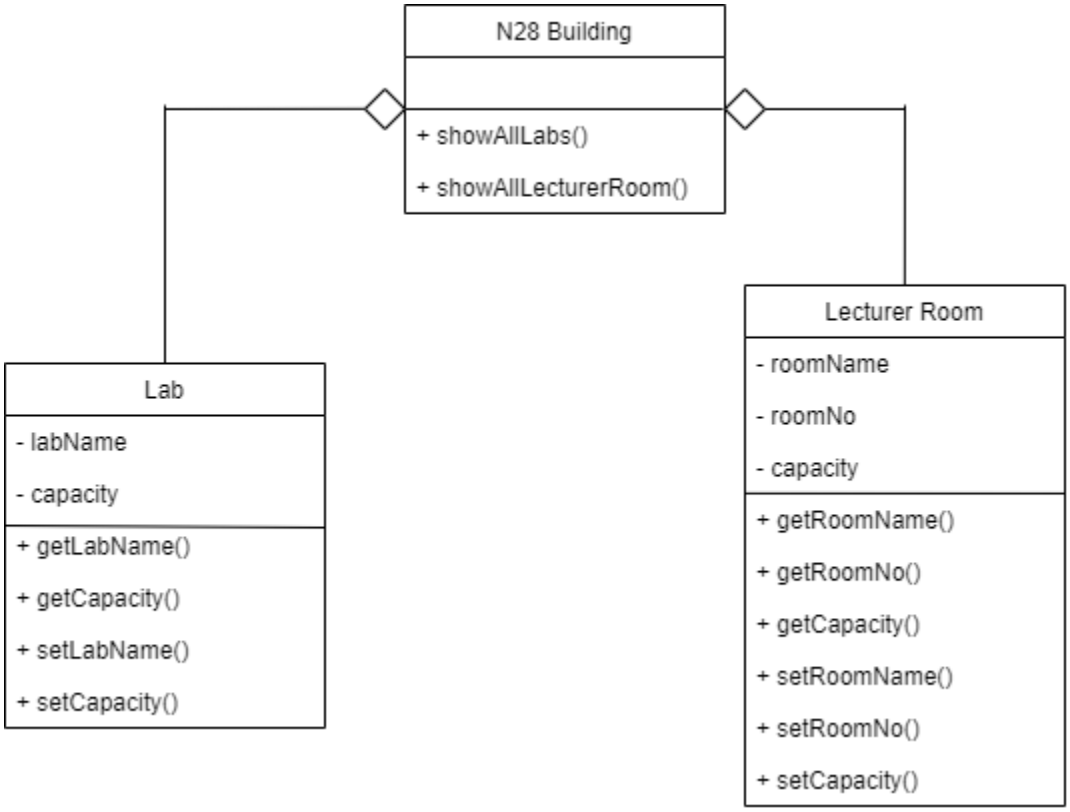
In the main function create an object of each class by giving necessary input and show the appropriate details about that object. ***[Mark 5]***

Create some dummy attributes or behavior like **description()[this function will display the description of the class e.g. Two Year Monthly Deposit Scheme, You need to deposit a fixed amount of money each month]** to show the effect of different **types of inheritance** and **access specifiers [See the table of type of inheritance].** Write necessary comments in the code to explain your task.

[Mark 5]

Task 2 :

Based on the UML diagram, write a full program to implement the relationship of the classes.



Sample Output:

```
Welcome to N28 Building
Show all Labs:
Lab MPK1 60 Capacity
Lab MPK2 60 Capacity
Lab MPK3 50 Capacity
Lab MPK4 50 Capacity
Show all lecturers room:
Hafiz 102 3 Capacity
Shafie 105 3 Capacity
Aisyah 202 3 Capacity
Rahim 208 3 Capacity
```