**Design Patterns**

Tutor Application

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Bank Account

Make Payment

**Models:**

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Students with similar tutors/subjects

Direct Deposit Set up & Process User Payment

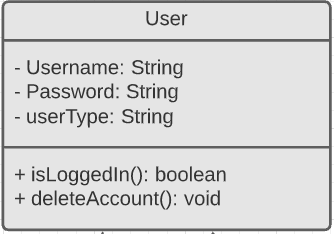
**Design Patterns:**

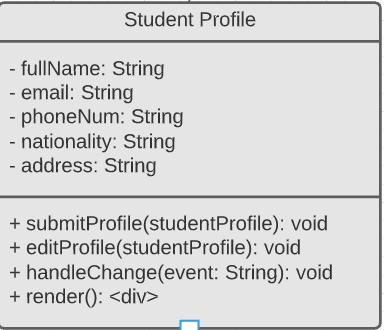
Singleton (DB\_Mgr)

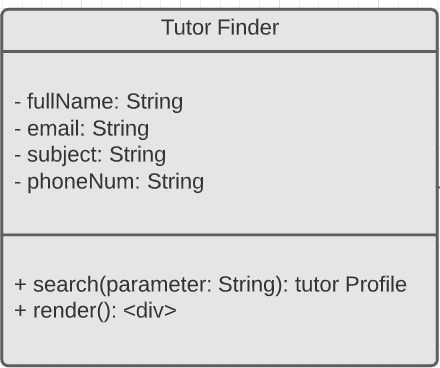
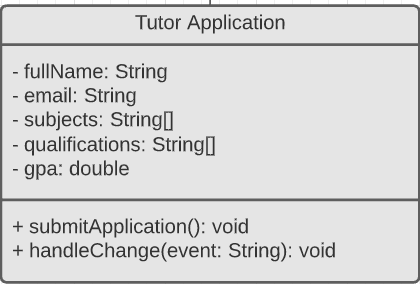
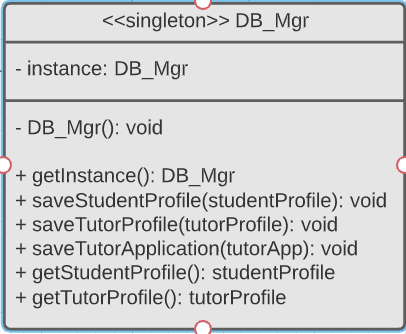
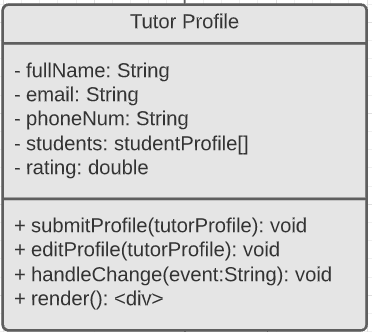
**Notes**

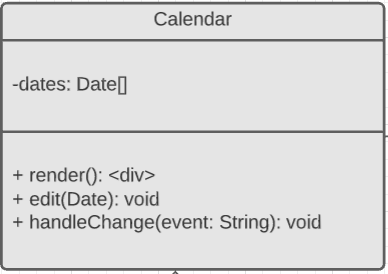
The classes listed in this document are not all currently implemented. Classes that are not implemented include: DB\_MGR, Tutor Finder, Calendar, Date, Time, Tutor Pair, Search, Profile Manager, Bank Account, and Make Payment. They are shown in this document to demonstrate the ideal structure and design of the project, given more time.

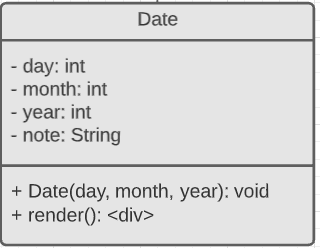
**UML Classes**

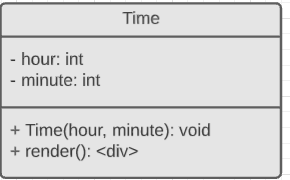
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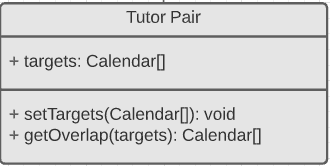
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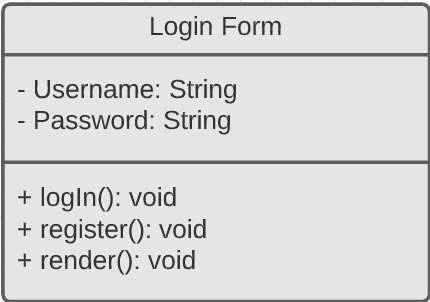
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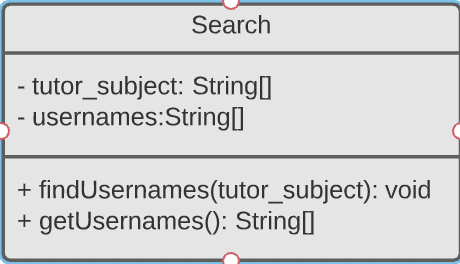
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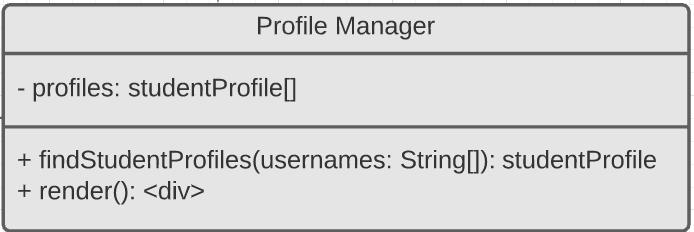
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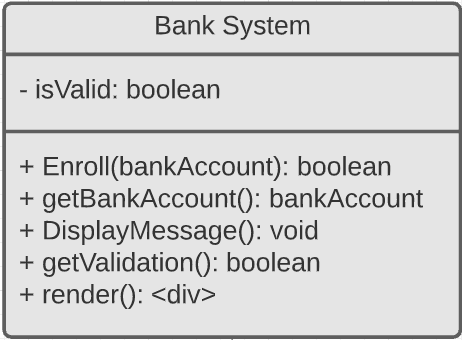
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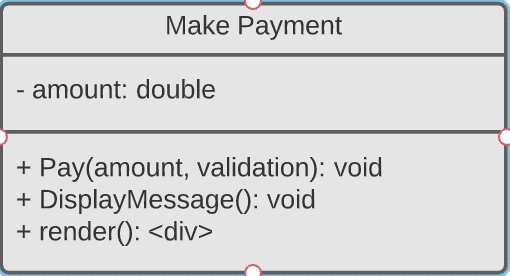
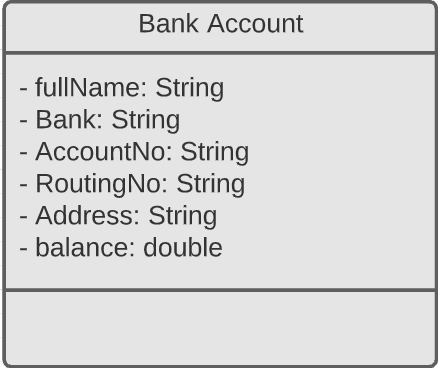
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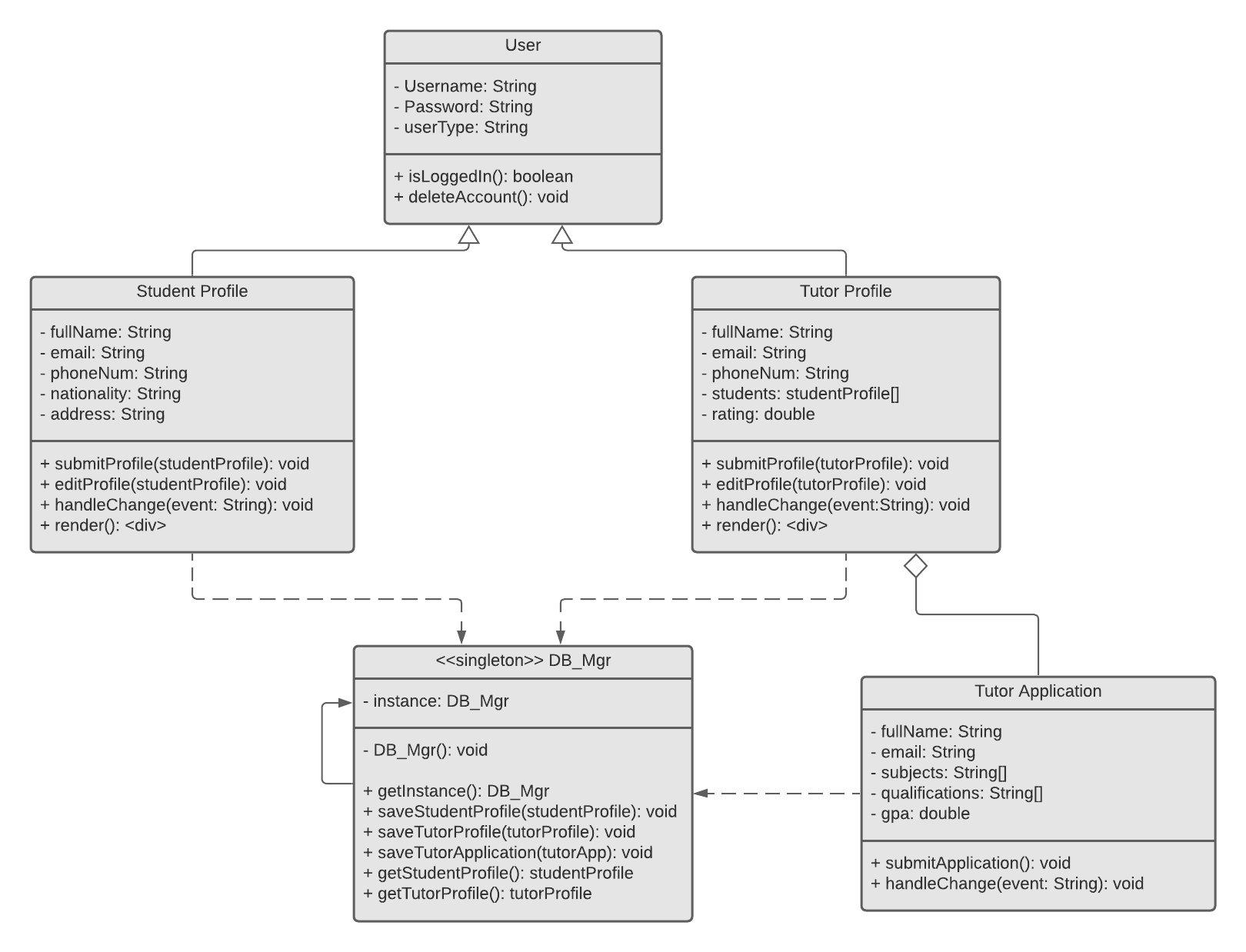
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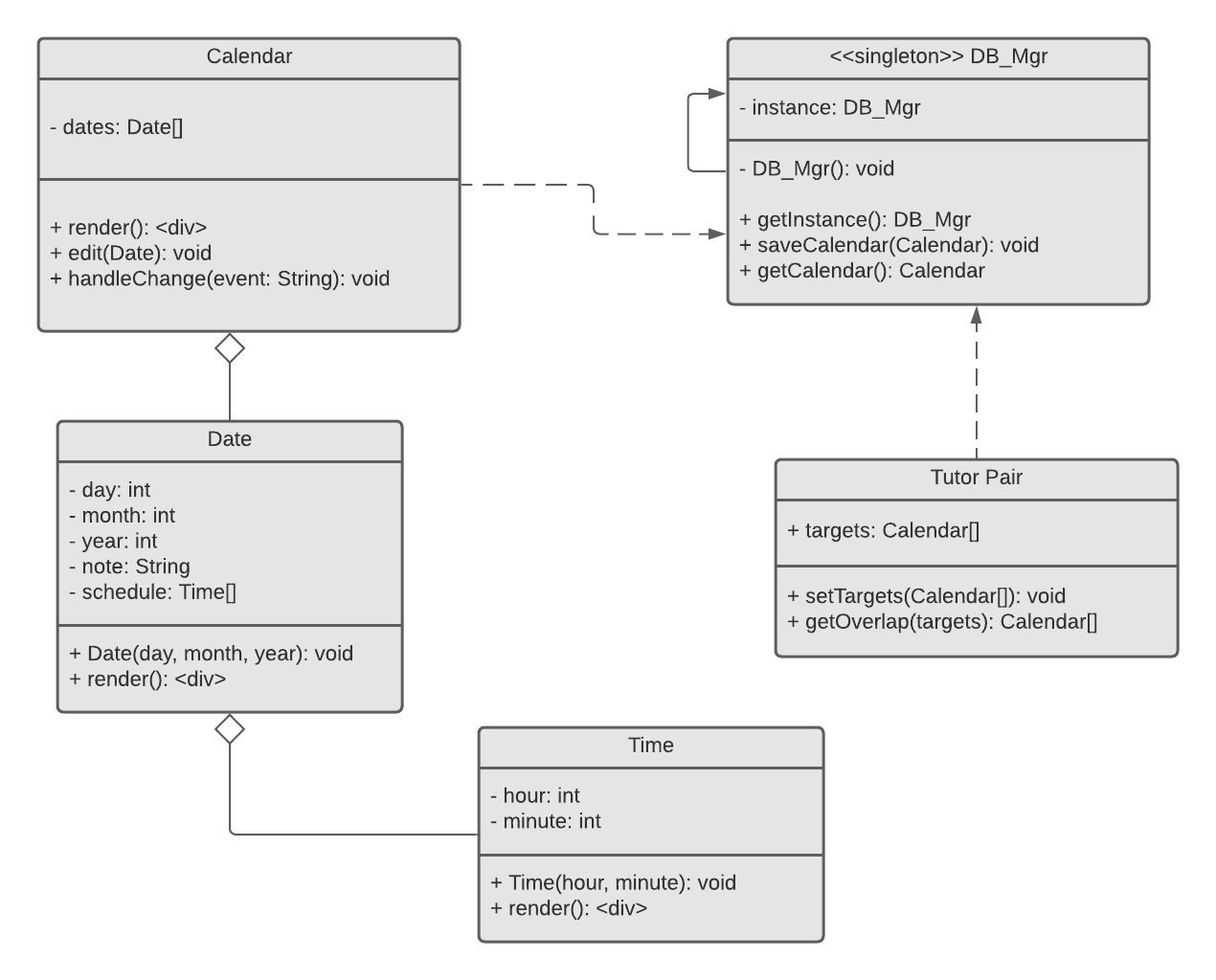
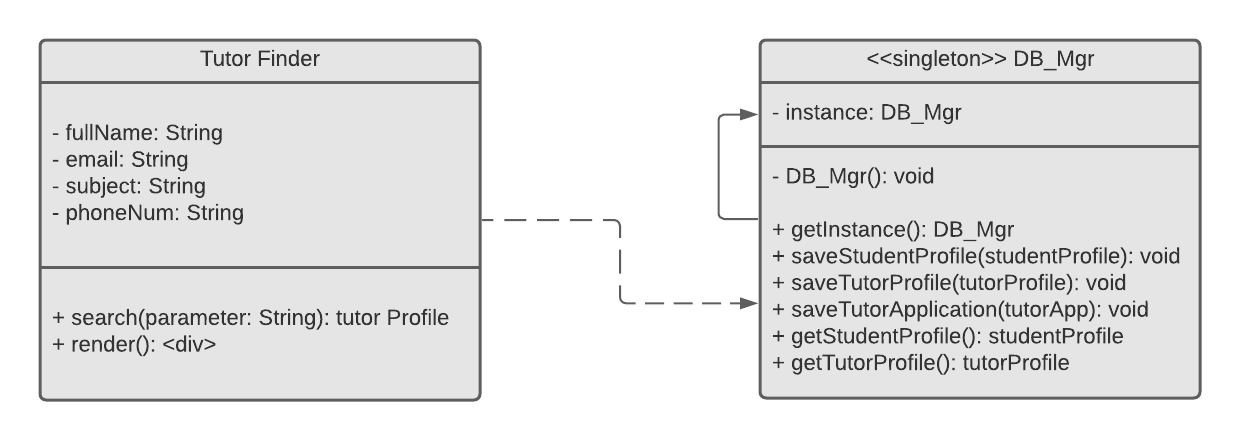
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**Models**

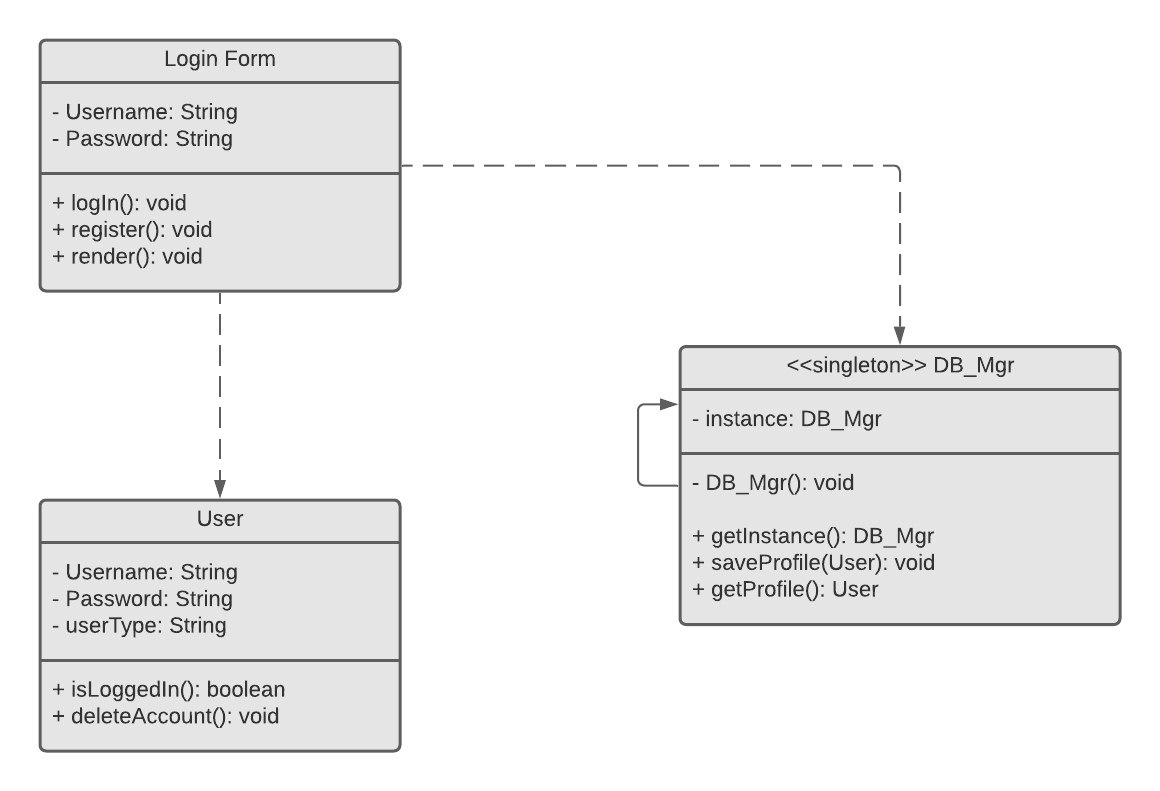
Create User Profile



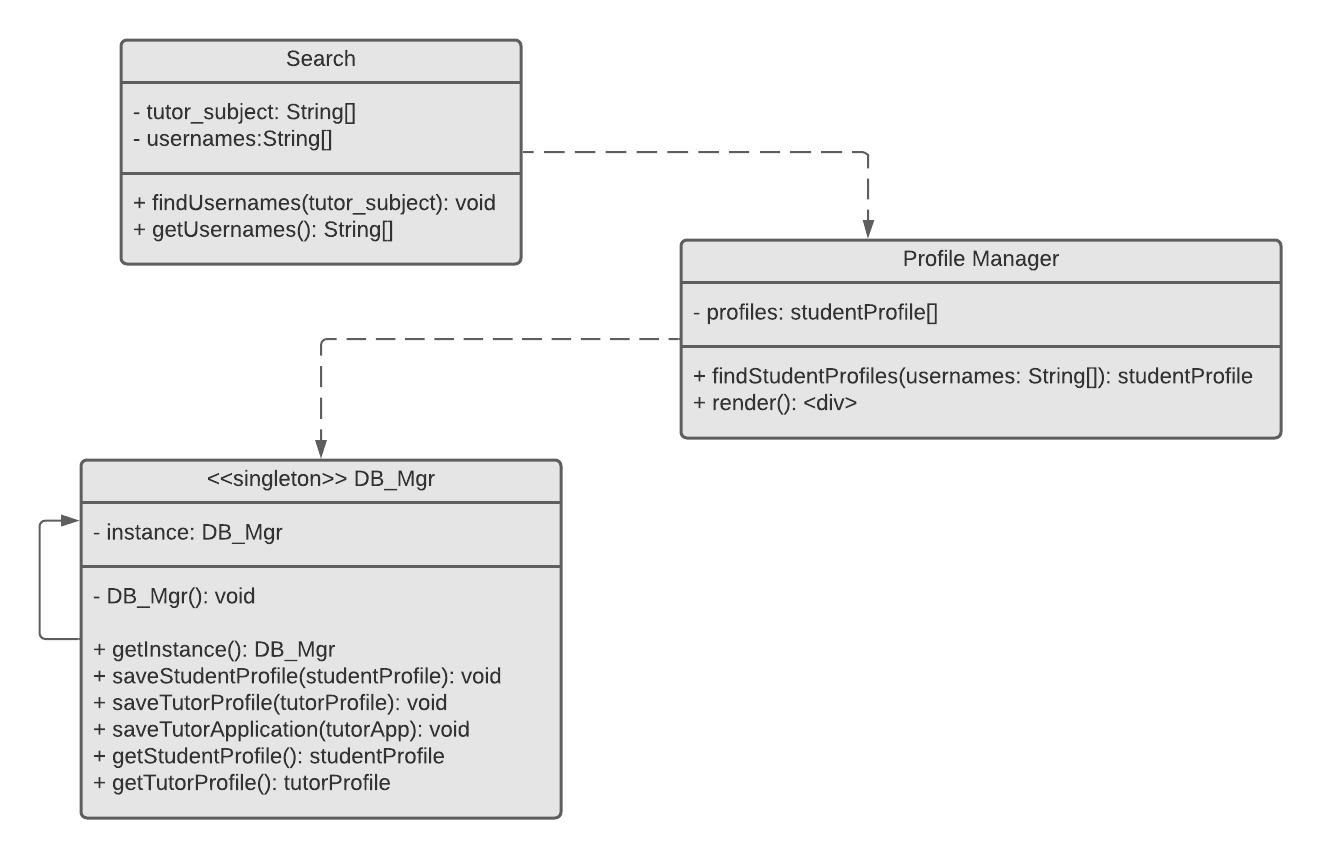
Search Tutor

Calendar & Compare Schedules

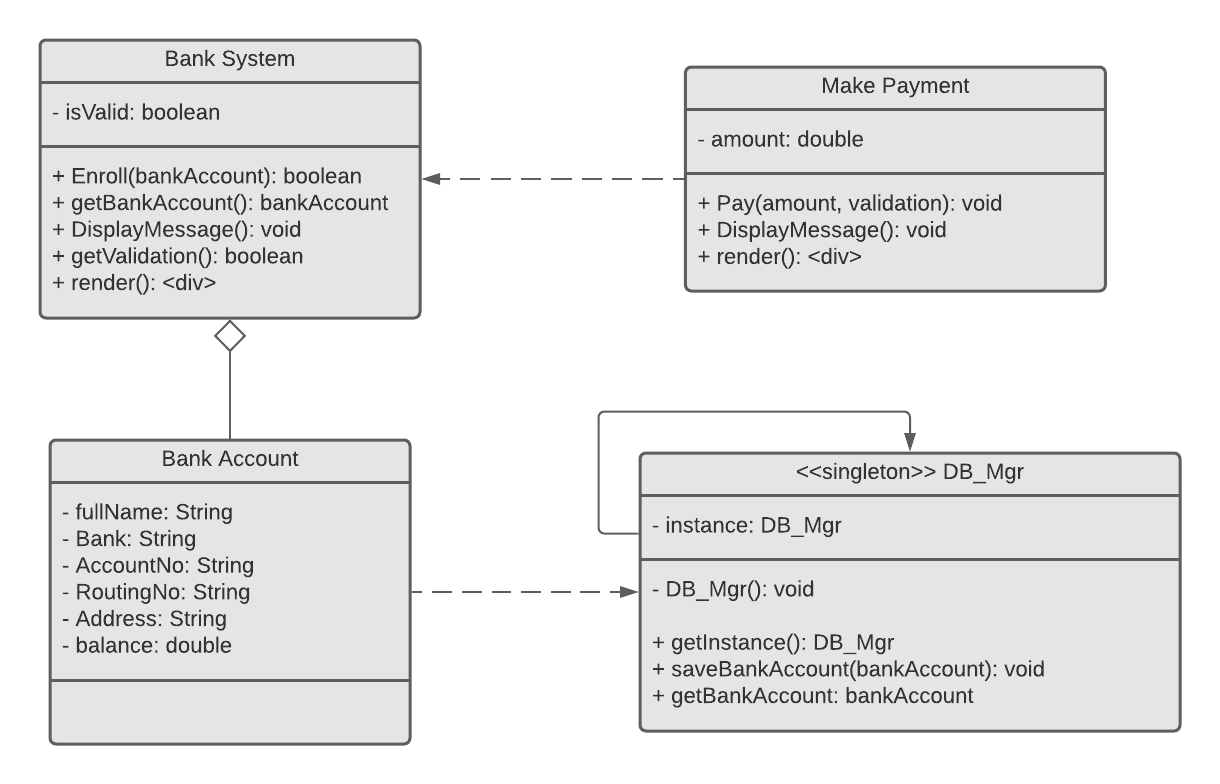
Log In



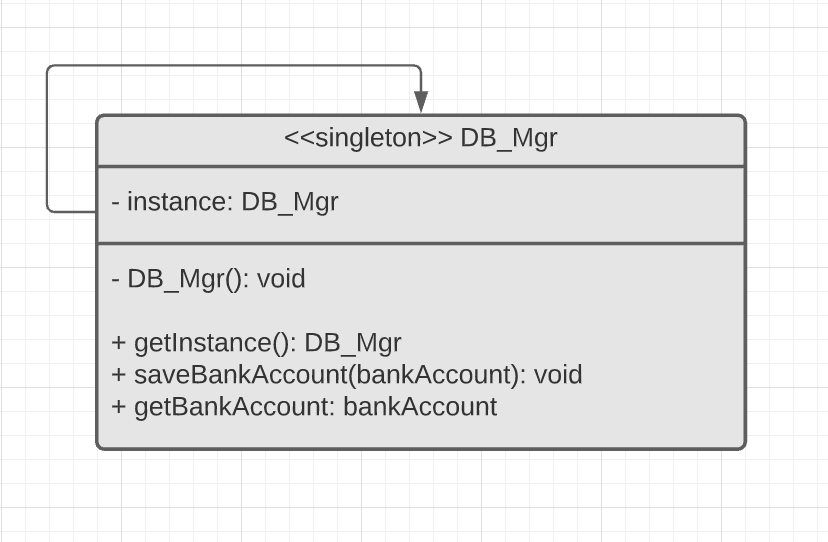
Students with similar tutor/subjects



Direct Deposit Set up & Process User Payment



**Design Patterns**

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* A singleton design pattern is used when we want to ensure that exactly one object is needed to coordinate actions across the system.

In the case of a Database Manager class, it is useful to restrict the instantiation of a class to one single instance, because there is no need for multiple objects of the class to be declared at any point in time. All the classes that are associated to the DB\_Mgr class will only need one instance to coordinate actions across the Tutor App. To be able to implement a singleton pattern, one could declare all constructors of the class to be private, and provide a public static method that returns a reference to the instance.