

### Single Responsibility Principle

The first example is of Single Responsibility Principle where I a UserAccount class that uses the Username, Password and Email classes to hash the password and validate the username and email.

### Open/Close Principle

The next example is of the Open/Close Principle is where one class is called SendMessage which sends different types of messages like Text or Image messages. Message is the abstract class and TextMessage and ImgMessage both extend Message to handle the different types of messages.

### Liskov Substitution Principle

Main class is TransportationDevice which then is used by devices with and without engines and then the classes Car and Cicycle uses the classes with and without engine which they extend transportationdevice.

### Interface Segregation Principle

The third example is of Interface Segregation Principle where the base interface is ILoands that extends IPayLoan and IGetLoan. The classes which implement the interfaces is College student which only gets to implement IGetLoans and GraduateStudent only gets to implement IPayLoan, but NormalPerson gets to implement both interfaces.

### Dependency Inversion Principle

The last example is of Dependency Inversion Principle which starts with IRifle and SmallRifle and BigRifle implements IRilfe to let the classes access the shoot() function.