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Description automatically generatedCairo University  
Faculty of Computers and Artificial Intelligent

**CS251 - Software Engineering I**

# Team

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**Solid Principles:**

* The Single responsibility principle:

We achieved the single responsibility principle (SRP)

states that every class in a program should have responsibility for just a single piece of that program functionality like (Time ) class.

* The Open/Closed principle:

We achieved the Open/Closed principle states by using inheritance and polymorphism with creating an Abstract class that serves as base class for all types of objects and derived classes that extends from it

Like (Parking method ) as Base class and (First\_fit ,Best\_fit ) as derived classes.

* The Interface segregation:

We achieved the Interface segregation (ISP)

states by making 2 different interface classes  
and using them in different classes so that every class has one responsibility, like calculates fees and calculate total income and vehicle no interface classes, then implementing them in vehicle operation and garage operations.

**Design Patterns:**

* Strategy Pattern:

We achieved the Strategy pattern by creating an interface like (Calculate fees) and create concrete classes implementing the same interface like (vehicle operations )