**Object Oriented Programming Fundamentals**

1. What is the main difference between a class and an object? An object is the instantiation of a class
2. What is Encapsulation? Explain with a used case: Encapsulation is the packaging of related data together or hiding it from the outside world. For example a user’s information like date of birth, gender, etc… might have to be hidden away for privacy reasons.
3. What is Polymorphism? Explain with a used case
4. Explain Overriding & Overloading and its advantages
5. What is Inheritance and different types of inheritance? Explain with a used case
6. What is an abstract class?
7. What is an interface and how multiple inheritance is achieved with this
8. What are the access modifiers?
9. What are the various types of constructors?
10. What is ‘this’ pointer?
11. What is static and dynamic Binding?
12. How many instances can be created for an abstract class and why?
13. Which OOPS concept is used as a reuse mechanism and explain with a use case
14. Please identify one practical scenario for each pillar of OOPs.