
IT2154 Tutorial 3: OOP and Subtype Polymorphism

Question 1

What is encapsulation? Name one benefit of encapsulation. Support your argument with an example.

Question 2

What is abstraction via information hiding? Name one benefit of abstraction via information hiding.

Question 3

What is inheritance? Name one benefit of inheritance.

Question 4

What is subtype polymorphism? Name one benefit of subtype polymorphism.

Question 5

Consider the following requirement, can you apply C# OOP concepts to design a mobile phone simulation system.

- Each mobile has an IMEI code and a phone number. IMEI code is read-only, and phone number is readable and updateable.
- There are two types of mobile. IOS and Android.
 - Android mobile stores a gmail account.
 - IOS mobile stores an apple ID.
- Each mobile has an install application feature.
- When installing an application
 - Android mobile prints out "communicating with Google Play using the_gmail_account".
 - IOS mobile prints out "communicating with Apple App Store using the_apple_id."

Add a **Main** method to show case the subtype polymorphism.