

C++ Programming

Generalization Relationship

Mostafa S. Ibrahim

Teaching, Training and Coaching since more than a decade!

Artificial Intelligence & Computer Vision Researcher

PhD from Simon Fraser University - Canada

Bachelor / Msc from Cairo University - Egypt

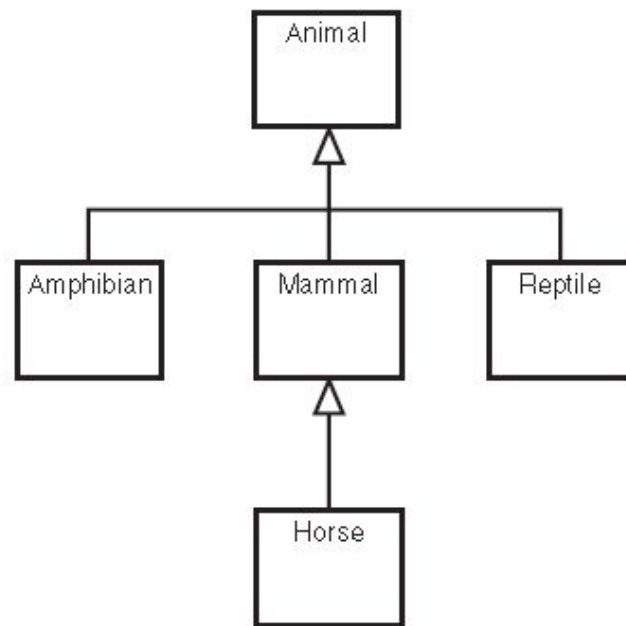
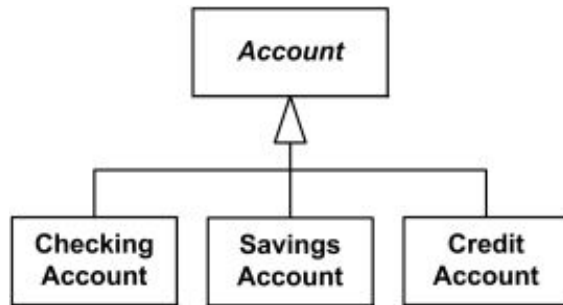
Ex-(Software Engineer / ICPC World Finalist)



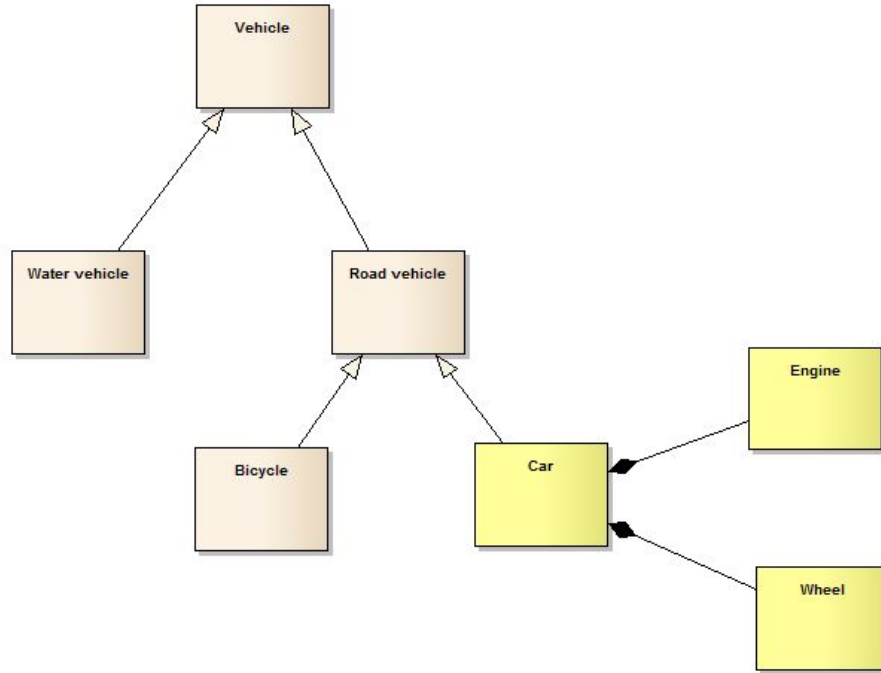
Generalization (Inheritance)

- It represents **Is-a** relationship
- Student is-a person. Teacher is-a person. Dean is-a person
 - So some **common** variables/functions + some **unique** variables/functions
- Circle **is-a** shape.
 - Rectangle is-a shape. Triangle is-a shape.
- Software Engineer **is-an** employee.
 - Manager is-an employee.
 - Office Boy is-an employee
- Apple **is-a** fruit. Orange is-a fruit. Watermelon is-a fruit
- (Wagon / Bicycle / Motor vehicle / Railed vehicle) **is-a** vehicle

Generalization in UML



Generalization in UML



“Acquire knowledge and impart it to the people.”

“Seek knowledge from the Cradle to the Grave.”