

# Classification

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**Classification is a mechanism which we use to understand the natural world** around us. As infants we begin to recognize different **categories**, like food, toys, pets, and people. As we mature, we divide these general classes into **subcategories** like siblings and parents, vegetables and dessert.

When faced with a **new** object, we **understand it** by fitting it into the categories with which we're acquainted:

- **Does it taste good?** Perhaps it's dessert.
- **Is it soft and fuzzy?** Maybe it's a pet.
- Otherwise, it's most certainly a toy of some sort!



**Encapsulation**—the specification of attributes and behavior as a single entity—allows us to build on this understanding of the natural world as we create software. By creating classes and objects that **model categories** in the "real world," we have confidence that our software solutions closely track the problems we are trying to solve.

Once we've designed our own classes, instead of using computer files and variables, our programs can be expressed in terms of **Customers**, **Invoices**, and **Products**.



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