Class Relationships

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In object-based programming, we want the different objects to *interact with one another*, the same way that their real-life counterparts do.

Example 1

A boy eats fruits. Whenever he eats a fruit, his sugar level increases by the amount of sugar of that fruit. The boy always starts with a sugar level of 50.

Example 2

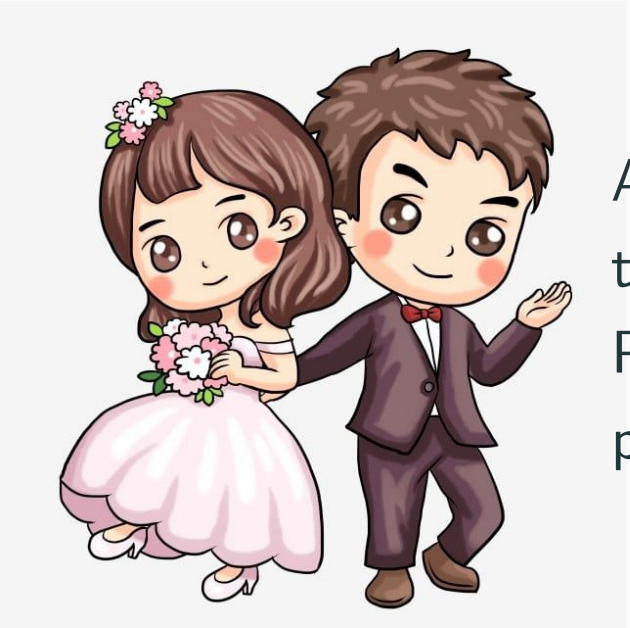
A soldier has a strength (`int` value). A soldier can equip a weapon. When a weapon is equipped, his strength is increased by the weapon's attack value. It is possible to know what weapon the solder is currently equipped with. The solder may un-equip the weapon he is currently carrying.

Example 3

A shopping cart can have products loaded on it, as long as adding the product to the cart will not exceed its maximum weight capacity. The product has name, and weight (an `int` value).

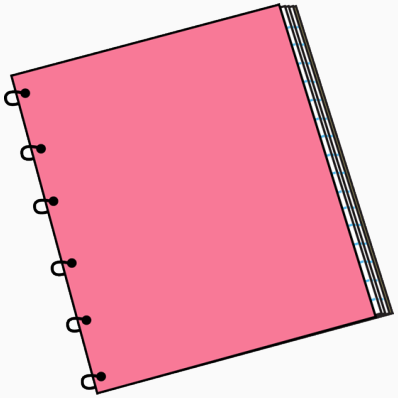
The products on the cart can be listed, and its current load can be shown.

Example 4



A person can marry another person, provided that one is male and the other is female. Provide a method to display the spouse of the person.

Example 5



A notebook has several pages. Each page has a page number, and a content (represent as a `String`). There should be a method to write on a page, as well as to get the content written on the page. Initially, a page is blank.

When a notebook is created, the number of pages must be provided, and the pages are numbered from 1, 2, 3, and so on. Initially, the notebook is at page 1. There should be a method to write on the current page, and there should also be a method to retrieve what is written on the current page. Finally, the pages of the notebook can be flipped forward or backward. If the notebook is already at the last or first page respectively, nothing happens.

☺ **Thank you!** ☺