Daily Assessment journal

Date: 24/06/2020

Course: c++ programming

Topic: classes & objects

Github repository: jyoth-course

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Forenoon session details

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objects

→ An object might contain other objects but they're still different objects. objects also have characteristics that are used to describe them for ex: a car can be red, or blue a mug can be full or empty. & soon, these characteristics are also called attributes. An attribute describes the current state of an object.

in programming, an object is self-contained, with its own identity. it is separate from other objects. each object has its own attributes, which describe its current state. each exhibits its own behaviours, which demonstrate what they can do.

person object
name: "John"
age: 25
talk()

person object
name: "Amy"
age: 22
talk()

car object
color: red
year: 2015
start()
stop()
horn()

in computing, objects aren't always representative of physical items. for ex: a programming object can represent a date a time, a bank account is not tangible you can't see it or touch it but it's still a well-defined object it has its own identity. attributes, & behaviours.

Class

- objects are created using classes, which are actually the focal point of oop. the class describes what the object will be, but is separate from the object itself.

In other words, a class can be described as an object's blueprint, description, or definition. programming wise in the same fashion we define a class, which becomes the blueprint for creating objects. each class has a name & describes attributes & behaviours.

In programming the term type is used to refer to a class name when creating an object of a particular type.

Encapsulation

part of the meaning of the word encapsulation is the idea of surrounding an entity, not just to keep what's inside together, but also to protect it.

In object orientation, encapsulation means more than simply combining attributes & behaviours together within a class. it means restricting access to the inner workings of that class.

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Creating a new class

— It is generally a good practice to define your new classes in separate files. this makes maintaining & reading the code easier.

→ to do this, use the following steps in Codeblocks:

click file-New-class...

→ give your new class a name, uncheck "Has destructor" & check header & implementation file shall be in same folder", then click the "Create" button.

→ note that two new files have been added to your project

Destructors:

Remember constructors? they're special member fun^s that are automatically called when an object is created. Destructors are special fun^s, as well. they're called when an object is destroyed or deleted.