

## 《专业英语》作业 2

英译汉如下英语材料，注意事项：

- 1) 用 A4 纸或相当大小的纸完成作业，在作业纸的顶部写明“班级 姓名 学号”；
- 2) 作业必须**手写**，不接收打印件与电子文件；
- 3) 可借助工具查询单词，但勿采用工具翻译，尤其是图像识别翻译；
- 4) 下次上课时由各班**学习委员**收集纸质作业，并按学号排序交给老师。

### Object-Oriented Programming

Object-oriented programming (OOP) refers to a special type of programming that combines data structures with functions to create re-usable objects.

Otherwise, the term object-oriented is generally used to describe a system that deals primarily with different types of objects, and where you can take the actions depends on what type of object you are manipulating. For example, an object-oriented draw program might enable you to draw many types of objects, such as circles, rectangles, triangles, etc. Applying the same action to each of these objects, however, would produce different results. If the action is Make 3D, for instance, the result would be a sphere, box, and pyramid, respectively.

Many languages support object oriented programming. In OOP data and functions are grouped together in objects (encapsulation). An object is a particular instance of a class. <sup>[1]</sup> Each object can contain different data, but all objects belonging to a class have the same functions (called methods). So you could have a program with many e-mail objects, containing different messages, but they would all have the same functionality, fixed by the email class. Objects often restrict access to the data (data hiding).

Classes are a lot like types—the exact relationship between types and classes can be complicated and varies from language to language.

Via inheritance, hierarchies of objects can share and modify particular functions. You may have code in one class that describes the features all e-mails have (a sender and a date, for example) and then, in a sub-class for email containing pictures, add functions that display images. <sup>[2]</sup> Often in the program you will refer to an e-mail object as if it was the parent (super-class) because it will not matter whether the e-mail contains a picture, or sound, or just text. This code will not need to be altered when you add another sub-class of e-mail objects, containing (say) electronic cash.