What is the purpose of Object Oriented Programming?

The main purpose of OOP is to represent the real world through things like objects, features and functions. In programming this takes place most often through entities and actions such as inheritance, hiding and polymorphism to name a few. The goal is to bind together the data and the functions that we operate on so that there is so that there is also only specific access to this data in our code.

Objects are basic representations of real life entities. Objects contain states, behavior, identity and methods. A state is represented by attributes of the object and its properties. Behavior refers to the methods of the object. It can also represent the interaction between itself and other objects. Identity is the objects name. Lastly methods are collections of actions that can be performed.

Performance Advantages/ Disadvantages:

One of the major benefits when it comes to the use of OOP is the greater ability for code reuse and in effect shrinking programming time overall. As a wide view, when we look at the ability for OOP to better represent information versus a more brute force style of code such as procedural, we can easily see that OOP gives us cleaner code as a whole. Having more efficient and concise code usually ends up with better performance as well. One of the downsides comes when code that is not in OOP needs to be refactored with say, legacy code in a lot of cases. This code needs to be broken down into our objects for better code reusability and function.