Recitation 1

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Little About me

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1st year Graduate student in Courant CS
I write bunch of C/C++ and Python

Introduction

- **Object Oriented Programming**
- **OOP in Java**
  - Basic
  - Objects and References
  - Dynamic dispatching

Object Oriented Programming

Encapsulation of data and code into a single structure

- fields and methods in an object

Inheritance

- Define a new type based on an existing type, where the new type can reuse code defined in the existing type
- The child type inherits the methods of the parent type

Subtyping

- Treating a type as if it were another type
- Anywhere a type T can be used, a subtype of T can be used

Basic

We‘ll go over through the code……

Objects and Reference

Classese are nothing but bunch of memories

- When you new something, you allocate memory space to it
- Java's objects have pointer semantics
- Which means the value of an object is its address

So you can do reference between objects

Dynamic Dispatching

Determining at run-time which method to call, based on the actual type of an object, not the declared type

```
void g(Vehicle v) { v.accellerate(); }

Vehicle x = new Car();

Car y = new Car();

g(x); g(y); // Here, you don't know which function you're calling until running time.
```