CSC 216 Sample Lecture
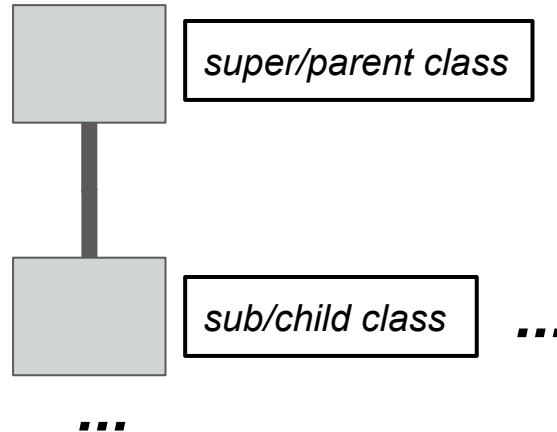
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Inheritance

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CSC216 Sample Lecture

Definition

- Inheritance is an object-oriented programming concept that enables objects to *acquire characteristics* from existing objects.

super/parent class

sub/child class ...

...

Example
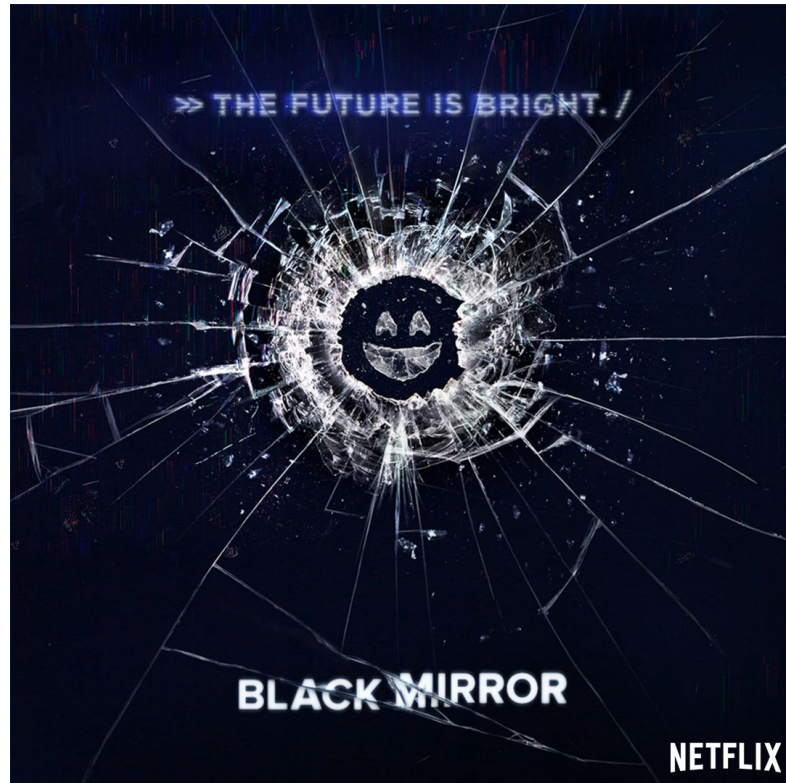

Shows

Movies

Syntax

```java
public class SuperClass {
    public SuperClass() {
        // Create parent class
    }
    // parent variable and method declarations
}


public class SubClass extends SuperClass {
    public SuperClass() {
        super(); // Calls SuperClass constructor
        // Create child class
    }
    // child variable and method declarations
    // can inherit SuperClass variable and method declarations
}
```
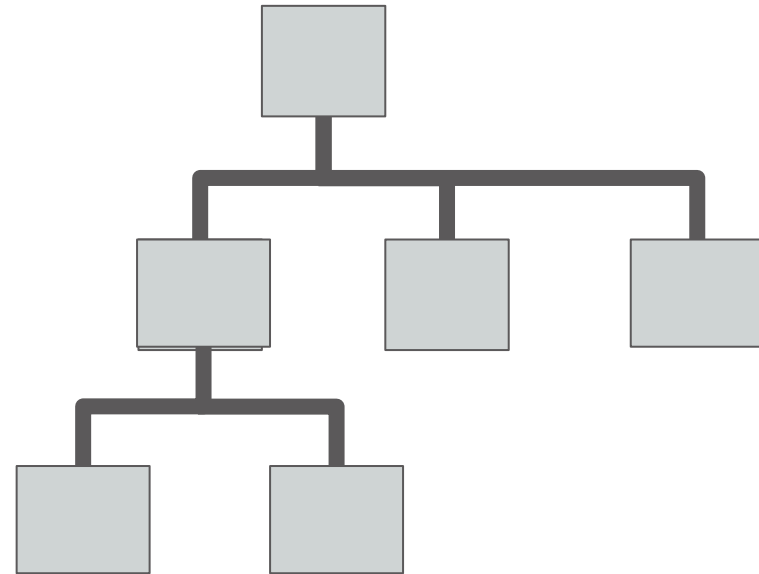
Demo

Advantages

- Reusability
  - *DRY* principle (Don't Repeat Yourself!)
- Extendability

Advantages cont...


```java
/**
 * Class representing a TV show on Netflix
 */
public class Show extends NetflixContent {

    public int episodeCount;

    public Show(String title, int rating, int episodes) {
        super();
        this.title = title;
        this.rating = rating;
        this.episodeCount = episodes;
        System.out.println("New Netflix Content added to Netflix...");
        System.out.println("* A new show " + title + " has been added to Netflix!");
    }

    /**
     * Get the Netflix Content title
     */
    public String getTitle() {
        System.out.println(String.format("\tTitle: %s", this.title));
        return this.title;
    }

    /**
     * Get the Netflix content star rating
     */
    public int getRating() {
        System.out.println(String.format("\tRating: %d", this.rating));
        return this.rating;
    }

    /**
     * Get the total number of show episodes
     */
    public int getEpisodeCount() {
        System.out.println(String.format("\tNo. of episodes: %d", this.episodeCount));
        return this.episodeCount;
    }
}
```

Reusability

Extendability

Questions?

Netflix
Luke Cage
Avengers: Infinity War
Superman
Black Mirror
Stranger Things