CYDEO

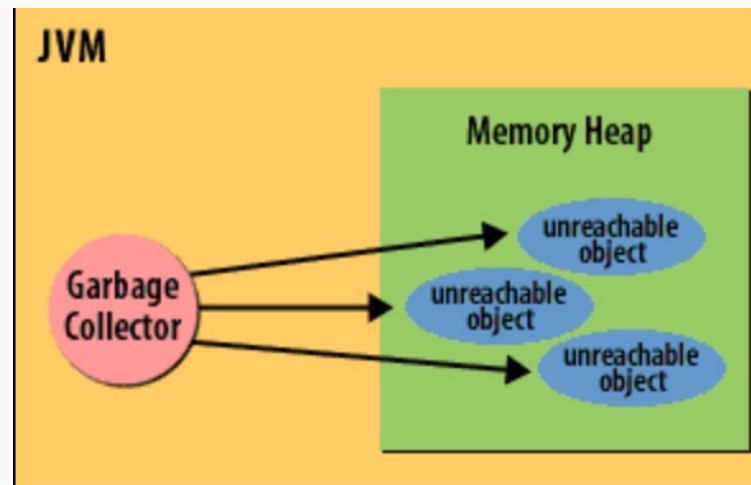## Garbage Collection

Garbage Collection

- JVM periodically runs a process known as the garbage collector, which removes unreferenced objects from memory

- It is automatically done by the garbage collector (a part of JVM)

How can an object be unreferenced?
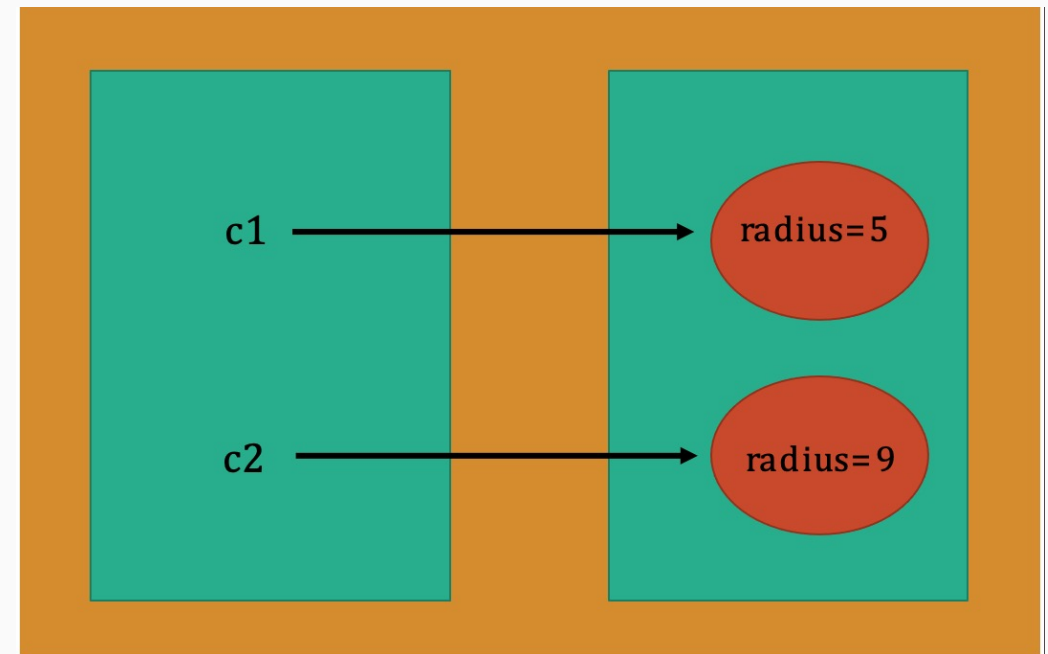
- By nulling the reference

```java
Dog d = new Dog();
d=null;
```

- By assigning a reference to another

```java
Dog d1=new Dog();
Dog d2=new Dog();
d1=d2;//now the first object referred by d1 is available for garbage collection
```

Garbage Collection example

```java
public class Circle{

    int radius;

}



Circle c1 = new Circle();
c1.radius = 5;

Circle c2 = new Circle();
c1.radius = 9;
```

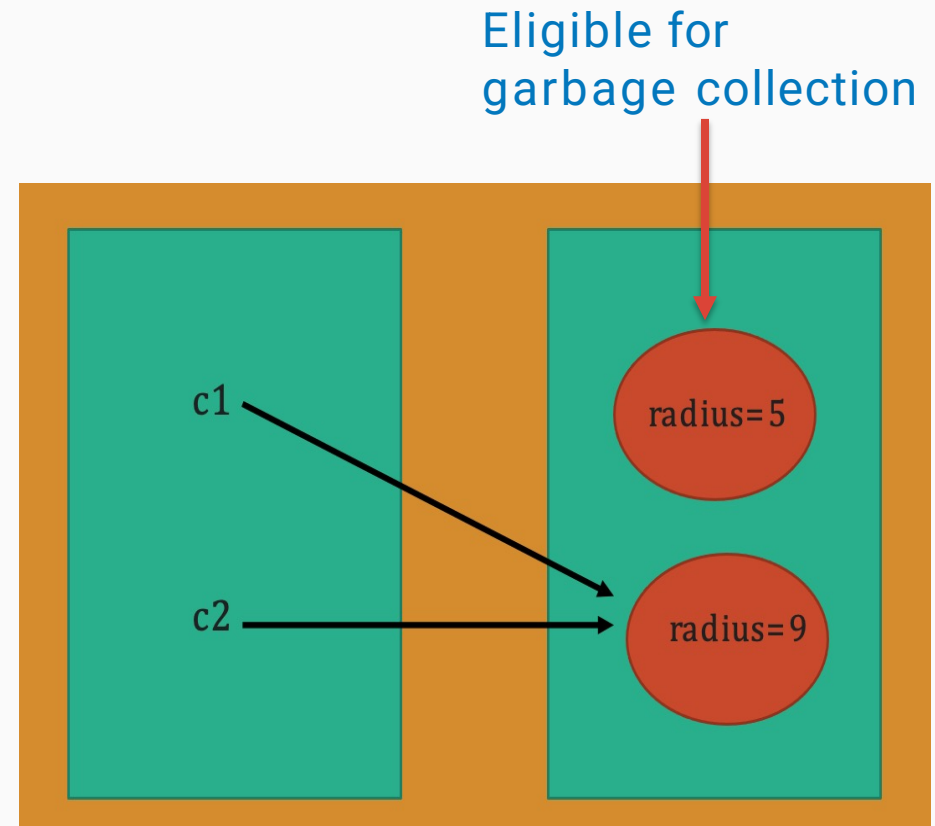c1 → radius=5

c2 → radius=9

Garbage Collection Example

```java
public class Circle{

    int radius;

}


Circle c1 = new Circle();
c1.radius = 5;

Circle c2 = new Circle();
c1.radius = 9;


c1=c2;
```

Eligible for
garbage collection

c1 → radius=5

c2 → radius=9

Access Modifiers

Access Modifiers

- There are 4 access modifiers available in Java:
  - public
  - protected
  - default
  - private

- A top level java class can have two access modifiers: public and default

- Variables, Constructors and methods can have all four access modifiers

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Access Modifiers

Access Modifiers	class	package	Subclass	World
public	Yes	Yes	Yes	Yes
protected	Yes	Yes	Yes	No
default (no modifier)	Yes	Yes	No	No
private	Yes	No	No	No