

Starcraft Tank

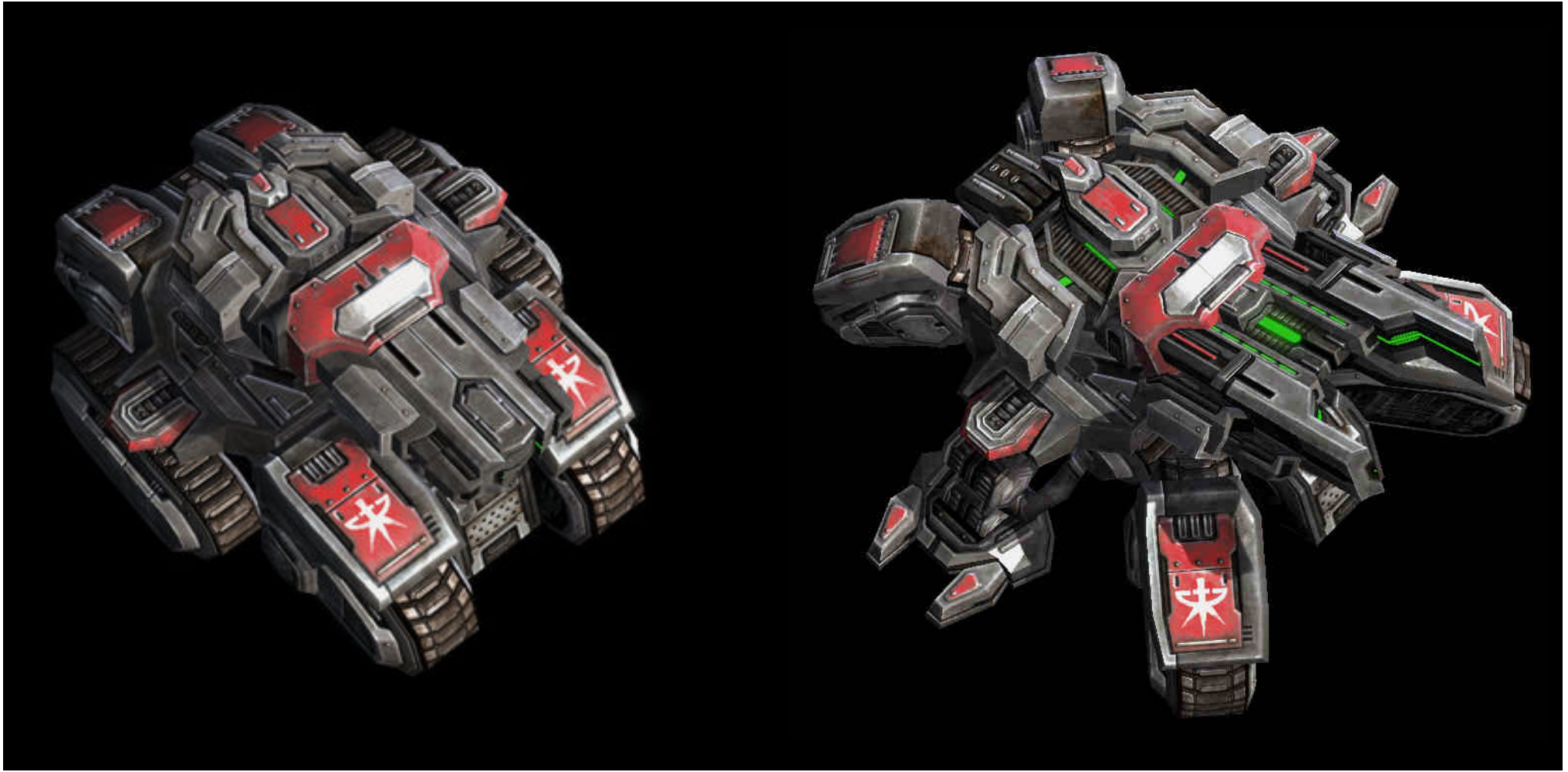
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Starcraft 2 is a game in which the human player controls unit





Normal mode

Siege mode



	Cooldown	Damage
Normal	0.74	15
Siege	2.14	40

Exercise

Propose a design, written in Java of the Tank

You should consider two modes: normal and siege

Your code should be open to more modes

	Cooldown	Damage
Normal	0.74	15
Siege	2.14	40

A possible solution

We can define 3 classes:

AbstractTank which provides the common code to all tank specialization

NormalTank captures the relevant features of a normal tank

SiegeTank express a tank in a siege mode

We can have an additional class to run our code

A possible solution

```
public class StartcraftExample {  
    public static void main(String[] args) {  
        NormalTank tank1 = new NormalTank();  
        SiegeTank tank2 = new SiegeTank();  
        tank1.print();  
        tank2.print();  
    }  
}
```

A possible solution

```
public abstract class AbstractTank {  
    public abstract String type();  
    public abstract double cooldown();  
    public abstract int damage();  
    public void print() {  
        System.out.println(  
            this.type() + "(" +  
                this.cooldown() + ", " +  
                this.damage() + ")");  
    }  
}
```

A possible solution

```
public class SiegeTank extends AbstractTank {  
    @Override  
    public String type() { return "SiegeTank"; }  
  
    @Override  
    public double cooldown() { return 2.14; }  
  
    @Override  
    public int damage() { return 40; }  
}
```

A possible solution

```
public class NormalTank extends AbstractTank {  
    @Override  
    public String type() { return "NormalTank"; }  
  
    @Override  
    public double cooldown() { return 0.74; }  
  
    @Override  
    public int damage() { return 15; }  
}
```

A possible solution

Executing StarcraftExample prints the following:

NormalTank(0.74, 15)

SiegeTank(2.14, 40)

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