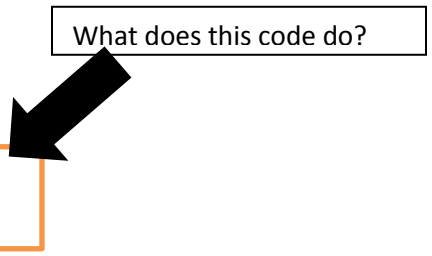
Chapter 3 Worksheet

```
public class Car extends Vehicle
{
    public void act()
    {
        move();
        if(atWorldEdge()) {
            turn(15);
        }

        if(Greenfoot.getRandomNumber(100) < 20) {
            turn(45);
        }
    }
}
```



(1) Change the code so that the Car turns a random number of degrees 20% of the time.

```
public class Car extends Vehicle
{
    public void act()
    {
        move();
        if(atWorldEdge()) {
            turn(15);
        }

        if(Greenfoot.getRandomNumber(100) < 20) {









        }
    }
}
```

Write the correct line of code here if your version was not correct:

(2) Change the code again so that the car turns a random number of degrees right or left 20% of the time.

```
public class Car extends Vehicle
{
    public void act()
    {
        move();
         if(atWorldEdge()) {
            turn(15);
         }

         if(Greenfoot.getRandomNumber(100) < 20) {









         }
    }
}
```

Write the correct line of code here if your version was not correct:

---

(3) Write the code so that the car turns when it "sees" the Barrel.

```
public class Car extends Vehicle
{
    public void act()
    {
        move();
         if(atWorldEdge()) {
            turn(15);
         }

         if(Greenfoot.getRandomNumber(100) < 20) {
            turn(45);
         }









    }
}
```

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(4) Write the code so that the car turns to the left and right when the user hits the left and right arrow keys.

```
public class Car extends Vehicle
{
    public void act()
    {
        move();
        if(atWorldEdge()) {
           turn(15);
        }

        if(canSee(Barrel.class)) {
            turn(45);
        }









    }
}
```

Write correct answer here if your answer above was not correct.

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(5) Fill in the method definition for checkEdges with the appropriate code.

```
public class Car extends Vehicle
{
    public void act()
    {
        move();
        if(atWorldEdge()) {
           turn(15);
        }

        if(canSee(Barrel.class)) {
            turn(45);
        }

        if(Greenfoot.isKeyDown("left")) {
           turn(-30);
        }
        if(Greenfoot.isKeyDown("right")) {
           turn(30);
        }
    }

    private void checkEdges() {









   }
}
```

Write correct answer here if your answer above was not correct.

```
    private void checkEdges() {









   }
```

(6) Create the method checkKeys and fill in the appropriate code.

```
public class Car extends Vehicle
{
    public void act()
    {
        move();
        checkEdges();

        if(canSee(Barrel.class)) {
           turn(45);
        }

        if(Greenfoot.isKeyDown("left")) {
          turn(-30);
        }
        if(Greenfoot.isKeyDown("right")) {
          turn(30);
        }
    }

    private void checkEdges() {
        if(atWorldEdge()) {
           turn(15);
        }
    }









}
```

Corrections:

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(7) Create the method checkBarrels and fill in the appropriate code.

```
public class Car extends Vehicle
{
    public void act()
    {
        move();
        checkEdges();

        if(canSee(Barrel.class)) {
            turn(45);
        }
        checkKeys();

    }

    private void checkEdges() {
        if(atWorldEdge()) {
            turn(15);
        }
    }

    private void checkKeys() {
        if(Greenfoot.isKeyDown("left")) {
          turn(-30);
        }
        if(Greenfoot.isKeyDown("right")) {
          turn(30);
        }
    }









}
```