You have been hired by Taito to help write their new game called Space Invaders. You are in charge of writing the Ship class. The ship in space invaders has an x,y-coordinate position as well as a variable to keep track of the number of lives. There are two ways to instantiate a Ship object. By default, it will start with 5 lives as well as be set to the position (400, 600). You can also instantiate a Ship object using its one parameter constructor that allows you to start the Ship at (400,600) but you can choose how many lives you have. The Ship class has two methods. The display() method will draw a white rectangle that is 100 pixels wide and 50 pixels tall whose center is the (x,y) coordinate of the Ship object. The other method called fire() will instantiate a Bullet object using the Bullet constructor below:

Bullet(float speed)  
{  
//body not shown  
}

Then add that Bullet object to a List object called bList. The List class has one method called add(Bullet name) that will put the Bullet object in the list.

class Ship {  
 float x;  
 float y;  
 int lives;  
   
 Ship() {  
 x=400;  
 y=600;  
 lives =5;  
 }  
  
 Ship(int lv) {  
 x=400;  
 y=600;  
 lives =lv;  
 }  
  
 void display(){  
 rectMode(CENTER);  
 fill(255);  
 rect(x,y,100,50);  
 }  
  
 void fire(){  
 Bullet b = new Bullet(4.5);  
 bList.add(b);  
 }  
}