models.Bullet

Line and mutation coverage & Mutations before and after adding tests:

	Line coverage	Mutation coverage
Bullet.java	74% 32/43	58% 14/24

Line	Mutation
31	1. negated conditional → KILLED
38	1. removed call to models/game/Bullet::setVelocity → KILLED
43	1. Replaced double addition with subtraction → KILLED 2. removed call to models/game/Bullet::setRotation → KILLED
53	1. removed call to models/game/Bullet::setLocation → NO_COVERAGE
54	1. Replaced double addition with subtraction → NO_COVERAGE 2. removed call to models/game/Bullet::setRotation → NO_COVERAGE
57	1. Replaced double addition with subtraction → NO_COVERAGE
66	1. removed call to models/game/Bullet::checkWrapAround → NO_COVERAGE
74	1. changed conditional boundary → SURVIVED 2. negated conditional → SURVIVED
75	1. removed call to models/game/Bullet::setAlive → KILLED
76	1. replaced return of integer sized value with (x == 0 ? 1 : 0) → SURVIVED
78	1. replaced return of integer sized value with (x == 0 ? 1 : 0) → SURVIVED
86	1. replaced return of double value with -(x + 1) for models/game/Bullet::getDistanceTravelled → KILLED
94	1. replaced return of integer sized value with (x == 0 ? 1 : 0) → NO_COVERAGE
111	1. mutated return of Object value for models/game/Bullet::getOrigin to (if (x != null) null else throw new RuntimeException) → KILLED
119	1. replaced return of double value with -(x + 1) for models/game/Bullet::getSpeed → KILLED
126	1. negated conditional → KILLED
127	1. mutated return of Object value for models/game/Bullet::getUrl to (if (x != null) null else throw new RuntimeException) → KILLED
129	1. mutated return of Object value for models/game/Bullet::getUrl to (if (x != null) null else throw new RuntimeException) → KILLED
137	1. replaced return of double value with -(x + 1) for models/game/Bullet::getDefaultSpeed → KILLED
145	1. replaced return of double value with -(x + 1) for models/game/Bullet::getHostileSpeed → KILLED
161	1. replaced return of double value with -(x + 1) for models/game/Bullet::getMaxDistance → KILLED

	Line coverage	Mutation coverage
Bullet.java	95% 41/43	96% 23/24

Line	Mutation
31	1. negated conditional → KILLED
38	1. removed call to models/game/Bullet::setVelocity → KILLED
43	1. Replaced double addition with subtraction → KILLED 2. removed call to models/game/Bullet::setRotation → KILLED
53	1. removed call to models/game/Bullet::setLocation → KILLED
54	1. Replaced double addition with subtraction → KILLED 2. removed call to models/game/Bullet::setRotation → KILLED
57	1. Replaced double addition with subtraction → KILLED
66	1. removed call to models/game/Bullet::checkWrapAround → NO_COVERAGE
74	1. changed conditional boundary → KILLED 2. negated conditional → KILLED
75	1. removed call to models/game/Bullet::setAlive → KILLED
76	1. replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED
78	1. replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED
86	1. replaced return of double value with -(x + 1) for models/game/Bullet::getDistanceTravelled → KILLED
94	1. replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED
111	1. mutated return of Object value for models/game/Bullet::getOrigin to (if (x != null) null else throw new RuntimeException) → KILLED
119	1. replaced return of double value with -(x + 1) for models/game/Bullet::getSpeed → KILLED
126	1. negated conditional → KILLED
127	1. mutated return of Object value for models/game/Bullet::getUrl to (if (x != null) null else throw new RuntimeException) → KILLED
129	1. mutated return of Object value for models/game/Bullet::getUrl to (if (x != null) null else throw new RuntimeException) → KILLED
137	1. replaced return of double value with -(x + 1) for models/game/Bullet::getDefaultSpeed → KILLED
145	1. replaced return of double value with -(x + 1) for models/game/Bullet::getHostileSpeed → KILLED
161	1. replaced return of double value with -(x + 1) for models/game/Bullet::getMaxDistance → KILLED

Added tests

CheckDistanceTest killed the mutations created at line 74-78.
updateLocationTest killed the mutations created at line 53-57.
get_set_firedByPlayerTest killed the mutations created at line 94.

```
64    @Test
65    void checkDistanceTest() {
66        assertTrue(playerBullet.checkDistance());
67        assertTrue(player.isAlive());
68
69        playerBullet.setDistanceTravelled(playerBullet.getMaxDistance());
70
71        assertTrue(playerBullet.checkDistance());
72
73        playerBullet.setDistanceTravelled(playerBullet.getMaxDistance() + 0.0001);
74
75        assertFalse(playerBullet.checkDistance());
76        assertFalse(playerBullet.isAlive());
77    }
....
....
93    @Test
94    void updateLocation() {
95        Point2D start = new Point2D(0, 0);
96        Point2D end = new Point2D(1, 1);
97        playerBullet.setLocation(start);
98        playerBullet.setVelocity(end);
99        playerBullet.setRotation(0.0);
100       playerBullet.setRotationSpeed(1.0);
101       playerBullet.setDistanceTravelled(0.0);
102
103       playerBullet.updateLocation();
104
105       assertEquals(new Point2D(1,1), playerBullet.getLocation());
106       assertEquals(1.0, playerBullet.getRotation());
107       assertEquals(start.distance(end), playerBullet.getDistanceTravelled());
108   }
109
110   @Test
111   void get_set_firedByPlayerTest() {
112       playerBullet.setFiredByPlayer(true);
113
114       assertTrue(playerBullet.getFiredByPlayer());
115   }
```