Ship
shipName: String xPos: int yPos: int noOfHitsMade: int noOfHitsNeeded: int
Ship() Ship(String shipName, int xPos, int yPos, int noOfHitsMade, int noOfHitsNeeded) displayShip() getShipName(): String getXPos(): int getYPos(): int getNoOfHitsMade(): int getNoOfHitsNeeded(): int setShipName(String) setXPos(int) setYPos(int) setNoOfHitsMade(int) setNoOfHitsNeeded(int)

1. TEST PLAN FOR THE SHIP CLASS

1.1 Create a Ship object with the default constructor.
1.2 Create a Ship object with all non- default constructor.
   (a) with valid field values (Positive Test)
   (b) with invalid field values (Negative Test)
1.3 Test all the get methods.
1.4 Test all the set methods.
   (a) with valid arguments (Positive Test)
   (b) with invalid arguments (Negative Test)
1.5 Test the display methods.

2. ACTUAL DETAILED TEST

2.1 Test 1: Create a Ship object with the default constructor.

Test Data:
- No input

Expected Results:
- shipName: ""
- xPos: 0
- yPos: 0
- noOfHitsMade: 0
- noOfHitsNeeded: 0

1

Actual Result:

2.2 Test 2: Create a Ship object with the non-default constructor.

(a) with valid field values (Positive Test)

Test Data:
- shipName: "Ship1"
- xPos: 2
- yPos: 3
- noOfHitsMade: 4
- noOfHitsNeeded: 5

Expected Results:
- shipName: "Ship1"
- xPos: 2
- yPos: 3
- noOfHitsMade: 4
- noOfHitsNeeded: 5

Actual Result:

(b) with invalid field values (Negative Test)

Test Data:
- shipName: "Ship1"
- xPos: S
- yPos: 1
- noOfHitsMade: 0
- noOfHitsNeeded: 0

Expected Results:
- shipName: "Ship1"
- xPos: 1
- yPos: 1
- noOfHitsMade: 0
- noOfHitsNeeded: 0

Actual Result:

2.3 Test 3: Test all the get methods.

(a) Test the getShipName method

Test Data:

- shipName: "Ship1"

Expected Results:
- shipName: "Ship1"

Actual Result:

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●  ○  ●            BlueJ:  Method Result

String getShipName()

    ship4.getShipName() returned:                    Inspect

    String                    "Ship1"               Get


                                                    Close
```
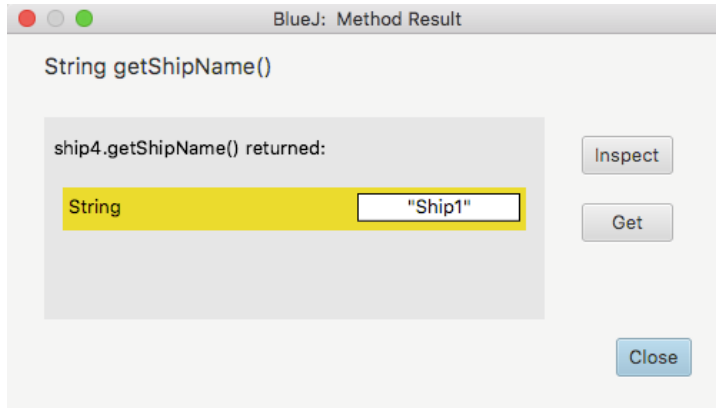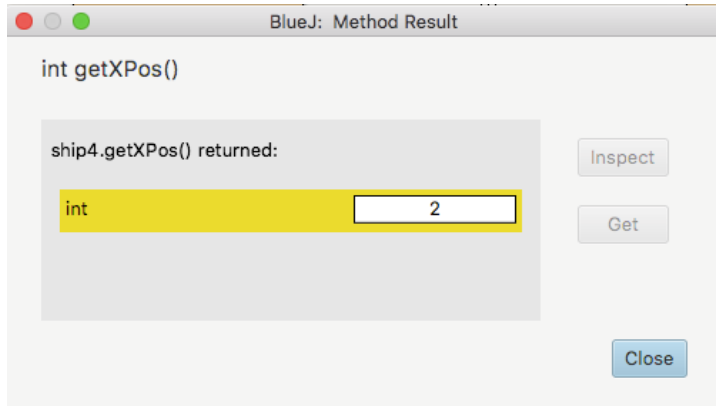
(b) Test the getXPos method

Test Data:
- xPos: 2

Expected Results:
- xPos: 2

Actual Result:

```
●  ○  ●            BlueJ:  Method Result

int getXPos()

    ship4.getXPos() returned:                        Inspect

    int                         2                    Get


                                                    Close
```
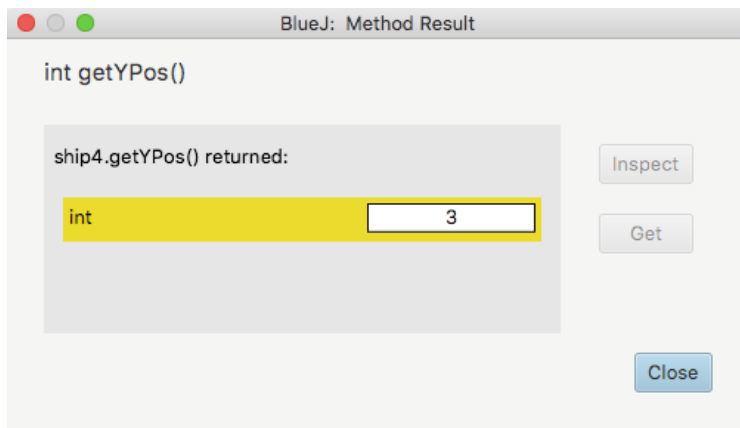
(c) Test the getYPos method

Test Data:
- yPos: 3
Expected Results:
- yPos: 3
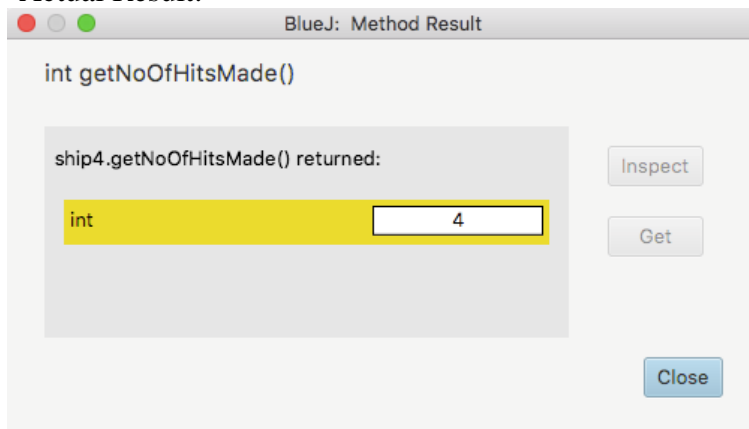Actual Result:

(d) Test the getNoOfHitsMade method

Test Data:
- noOfHitsMade: 4

Expected Results:
- noOfHitsMade: 4

Actual Result:

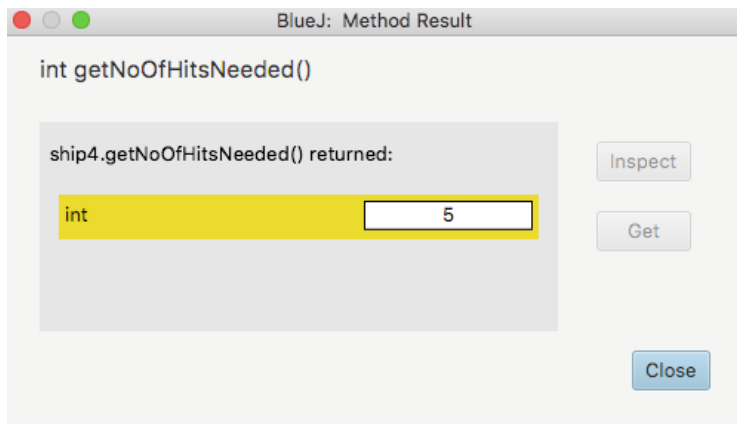## (e) Test the getNoOfHitsNeeded method

Test Data:
- noOfHitsNeeded: 5

Expected Results:
- noOfHitsNeeded: 5

Actual Result:

BlueJ: Method Result

int getNoOfHitsNeeded()

ship4.getNoOfHitsNeeded() returned:

int   5

Inspect

Get

Close

2.4 Test 4: Test all the set methods.

2.4.1 Test the setShipName method

(a) with valid arguments (Positive Test)

Test Data:
- shipName: "Ship1"

Expected Results:
- shipName: "Ship1"

Actual Result:

ship4 : Ship

private String shipName   "Ship1"   Inspect

private int xPos   0   Get

private int yPos   0

private int noOfHitsMade   0

private int noOfHitsNeeded   0

Show static fields   Close
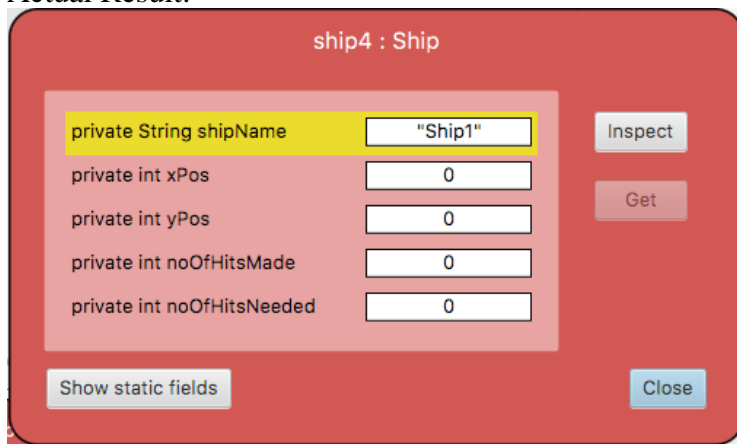
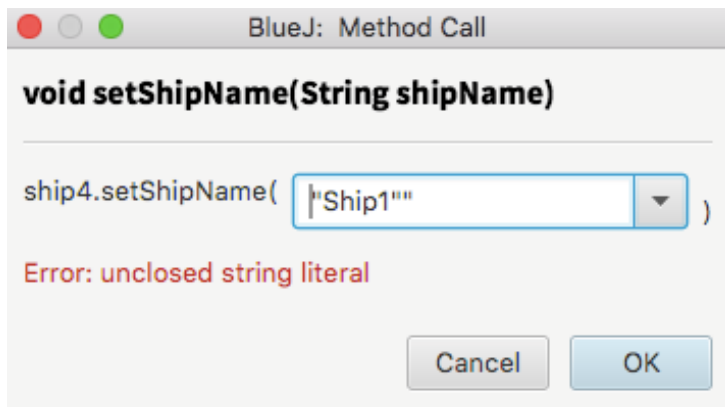### (b) with invalid arguments (Negative Test)

Test Data:
- shipName: "Ship1"""

Expected Results:
- shipName: "Ship1"

Actual Result:

2.4.2 Test the setXPos method

(a) with valid arguments (Positive Test)

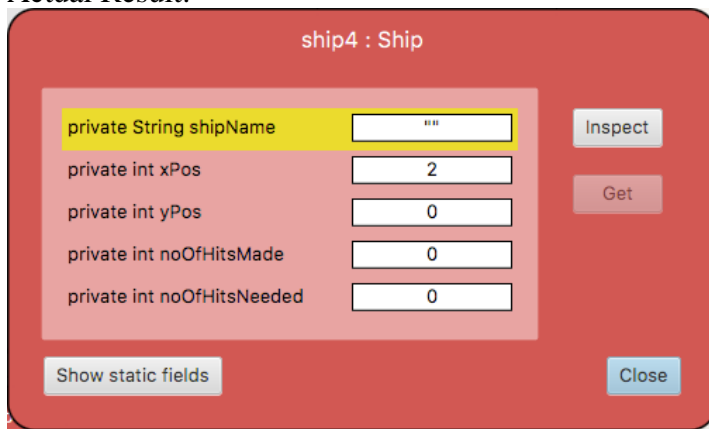Test Data:
- xPos: 2

Expected Results:
- xPos: 2

Actual Result:

(b) with invalid arguments (Negative Test)

Test Data:
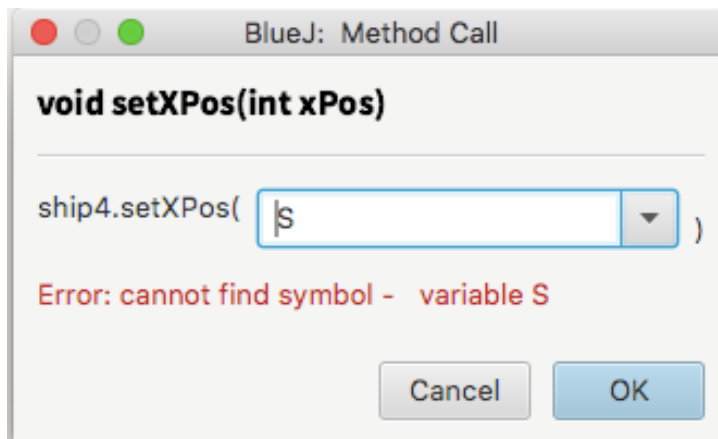- xPos: S

Expected Results:
- xPos: 2

Actual Result:

2.4.3 Test the setYPos method

(a) with valid arguments (Positive Test)

Test Data:
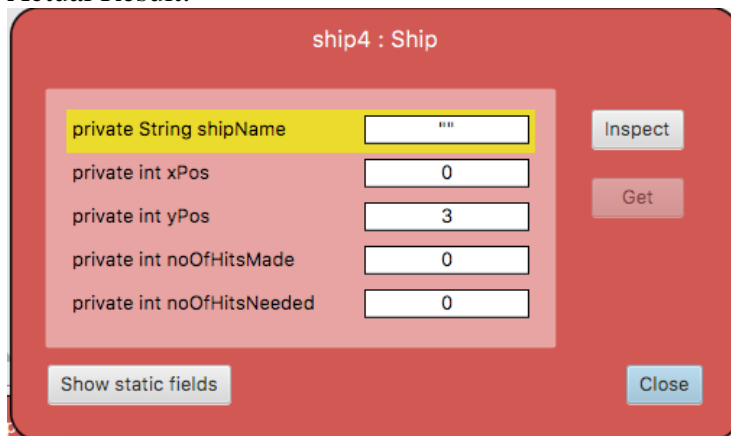- yPos: 3

Expected Results:
- yPos: 3

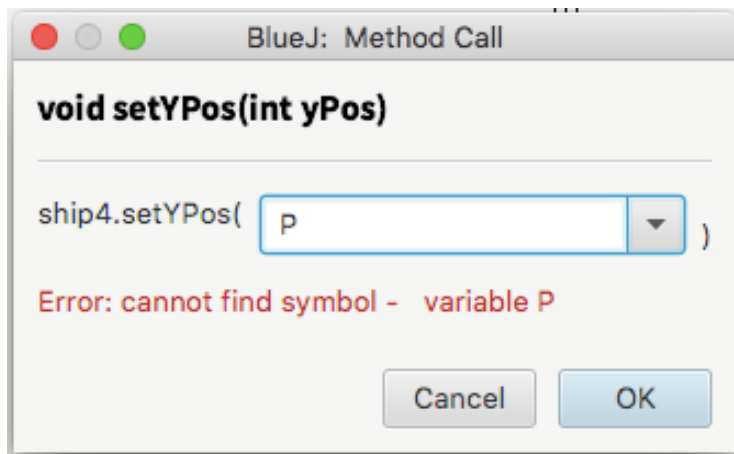Actual Result:

(b) with invalid arguments (Negative Test)

Test Data:
- yPos: P

Expected Results:
- yPos: 3

Actual Result:

BlueJ: Method Call

void setYPos(int yPos)

ship4.setYPos(P   ▼)

Error: cannot find symbol - variable P

Cancel   OK

2.4.4 Test the setNoOfHitsMade method

(a) with valid arguments (Positive Test)

Test Data:
- noOfHitsMade: 4

Expected Results:
- noOfHitsMade: 4

Actual Result:

ship4 : Ship

private String shipName	""
private int xPos	0
private int yPos	0
private int noOfHitsMade	4
private int noOfHitsNeeded	0

Inspect

Get

Show static fields   Close
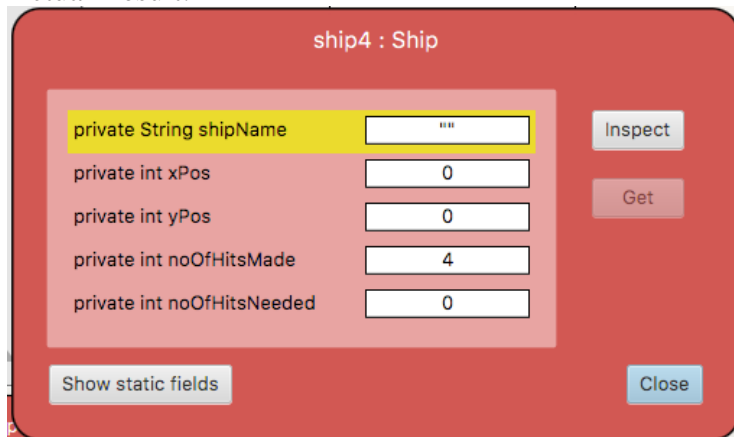
(b) with invalid arguments (Negative Test)

Test Data:
- noOfHitsMade: T

Expected Results:
- noOfHitsMade: 4

Actual Result:

BlueJ: Method Call

void setNoOfHitsMade(int noOfHitsMade)

ship4.setNoOfHitsMade(T)

Error: cannot find symbol - variable T

Cancel   OK
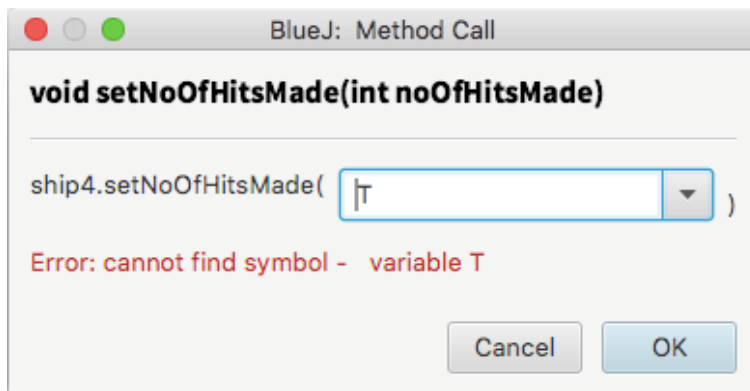
2.4.5 Test the setNoOfHitsNeeded method

(a) with valid arguments (Positive Test)

Test Data:
- NoOfHitsNeeded: 5

Expected Results:
- NoOfHitsNeeded: 5

Actual Result:

ship4 : Ship

private String shipName	""	Inspect
private int xPos	0	Get
private int yPos	0	
private int noOfHitsMade	0	
private int noOfHitsNeeded	5	

Show static fields   Close
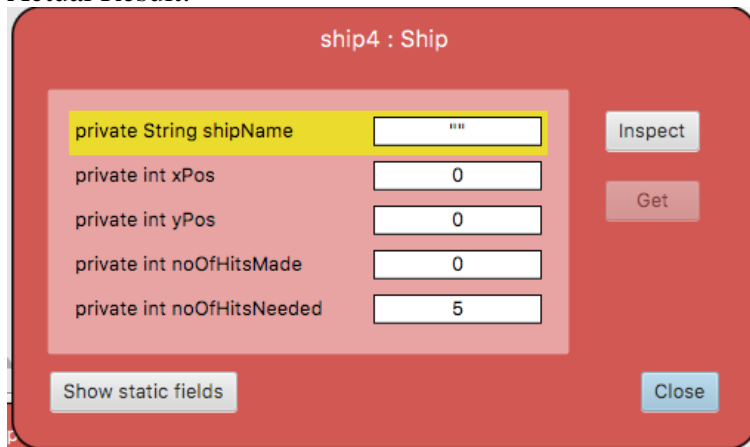
(b) with invalid arguments (Negative Test)
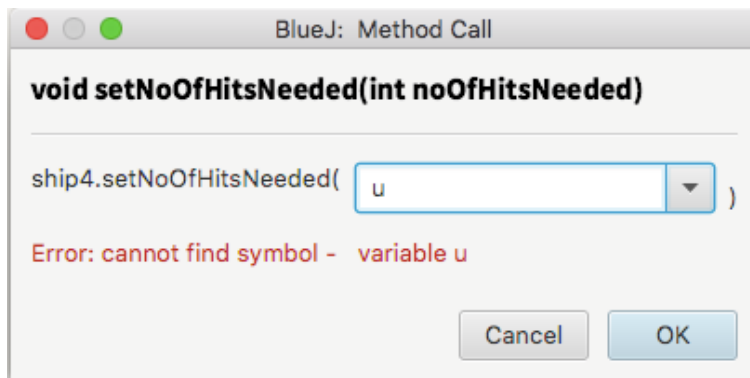
Test Data:
- NoOfHitsNeeded: u

Expected Results:
- NoOfHitsNeeded: 5

Actual Result:

2.5 Test the display methods.

Actual result matches the expected result