FIT9131 Programming foundations in Java S1 2019

Assignment 2

Formula 9131 Grand Prix
Test Strategy

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Part A: Test Plan

1. Create a Driver object with default constructor
2. Create a Driver object with non-default constructor
   2.A. with valid field values
   2.B. with invalid field values
3. Test all the get methods
   3.A. Test the getName method
   3.B. Test the getRanking method
   3.C. Test the getSpecialSkill method
   3.D. Test the getEligibleToRace method
   3.E. Test the getAccumulatedScore method
   3.F. Test the getAccumulatedTime method
4. Test all the set methods
   4.A. Test the setName method with valid argument
   4.B. Test the setName method with invalid argument
   4.C. Test the setRanking method with valid argument
   4.D. Test the setRanking method with invalid argument
   4.E. Test the setSpecialSkill method with valid argument
   4.F. Test the setSpecialSkill method with invalid argument
   4.G. Test the setEligibleToRace method with valid argument
   4.H. Test the setEligibleToRace method with invalid argument
   4.I. Test the setAccumulatedScore method with valid argument
   4.J. Test the setAccumulatedScore method with invalid argument
   4.G. Test the setAccumulatedTime method with valid argument
   4.H. Test the setAccumulatedTime method with invalid argument
5. Test the display method

Part B: Actual Test

Test 1.

Create Driver object with default constructor

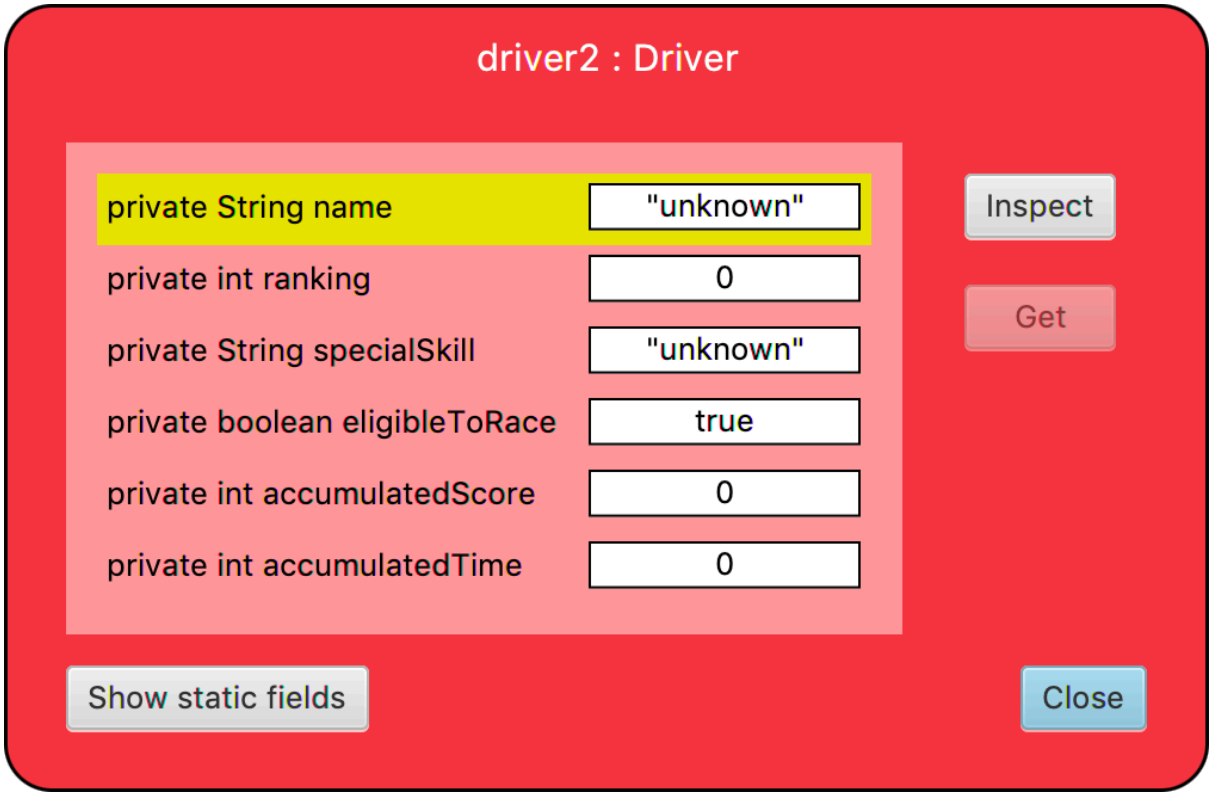
Test Data:

- No input

Expected Result:

- name: “unknown”
- ranking: 0
- specialSkill: “unknown”
- eligibleToRace: ture
- accumulatedScore: 0
- accumulagtedTime: 0

Actual Result:



Test 2.A.

Create a Driver object with non-default constructor with valid values

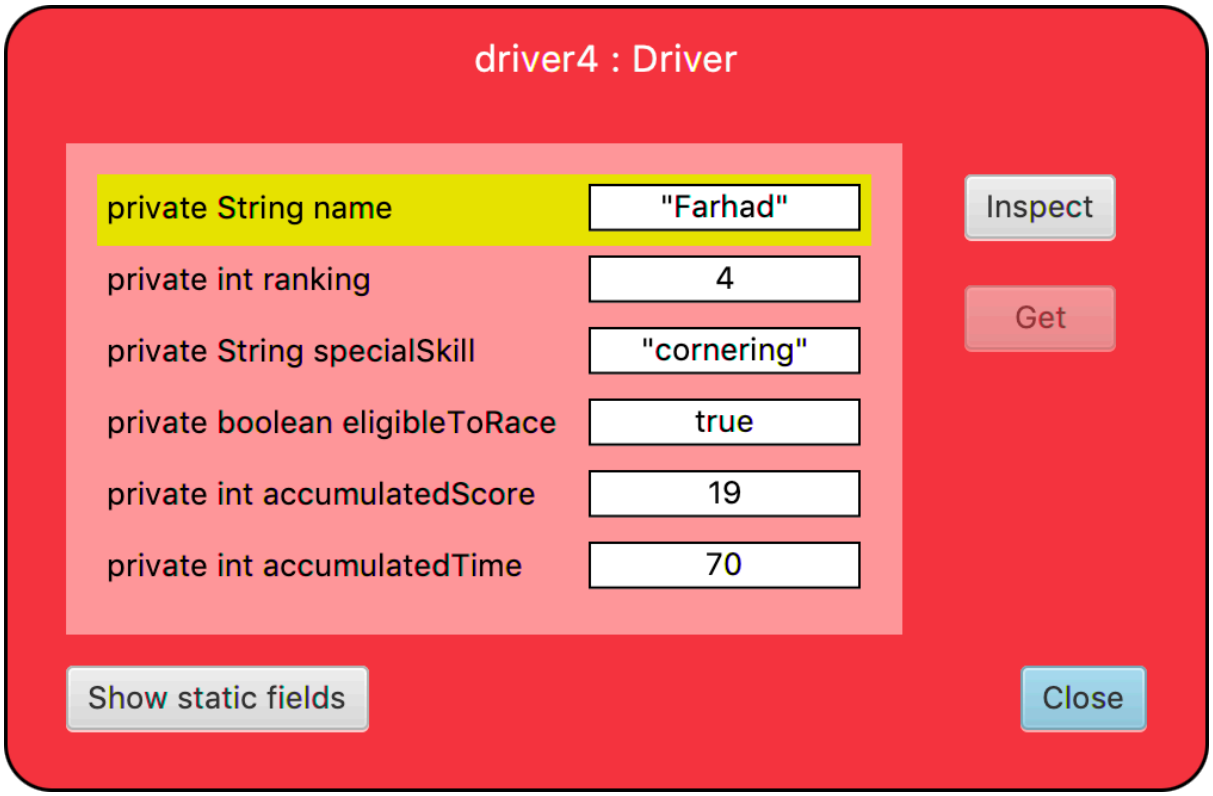
Test Data:

- name: “Farhad”
- ranking: 4
- specialSkill: “cornering”
- eligibleToRace: ture
- accumulatedScore: 19
- accumulatedTime: 70

Expected Result:

- name: “Farhad”
- ranking: 4
- specialSkill: “cornering”
- eligibleToRace: ture
- accumulatedScore: 19
- accumulatedTime: 70

Actual Result:



Test 2.B.

Create a Driver object with non-default constructor with invalid values

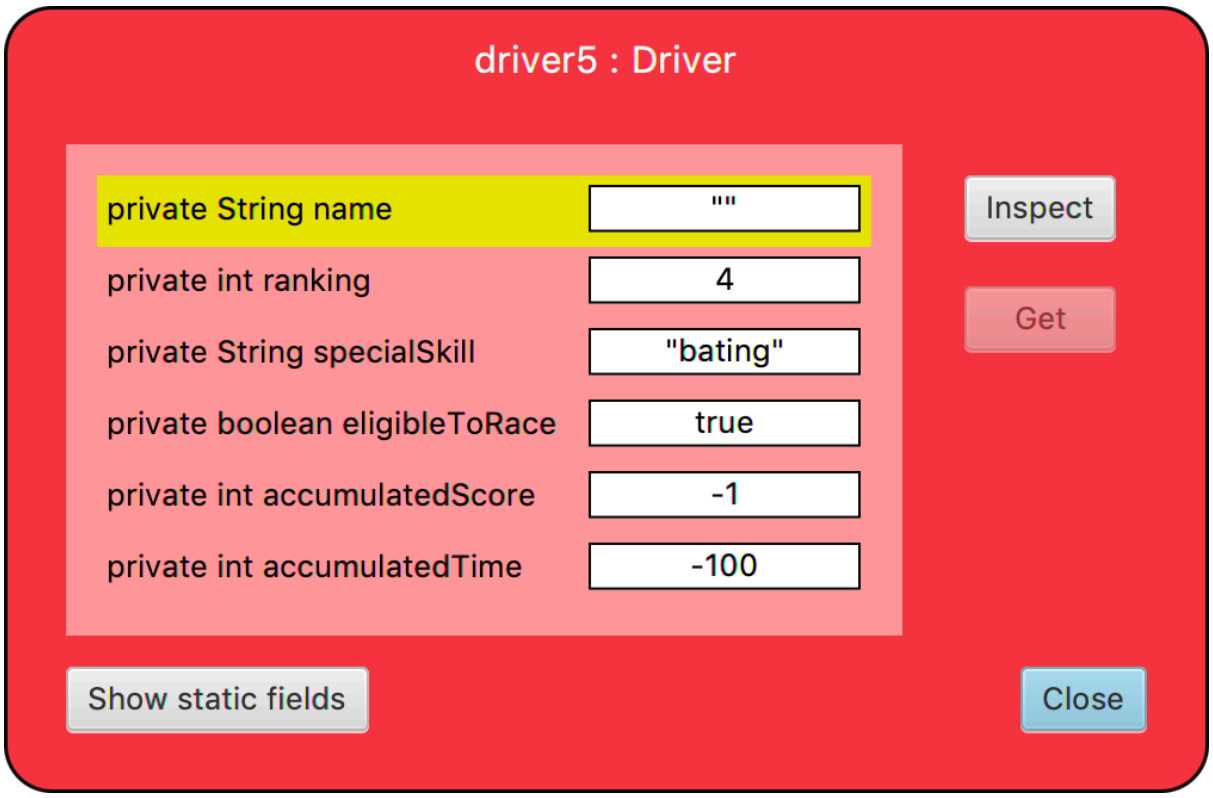
Test Data:

- name: " "
- ranking: 4
- specialSkill: "bating"
- eligibleToRace: ABC
- accumulatedScore: -1
- accumulatedTime: -100

Expected Result:

- name: "unknown"
- ranking: 0
- specialSkill: "unknown"
- eligibleToRace: ture
- accumulatedScore: 0
- accumulatedTime: 0

Actual Result:



NB: As most of the validation is done in Championship class the default values are not set

Test 3.A.

Test the getName method

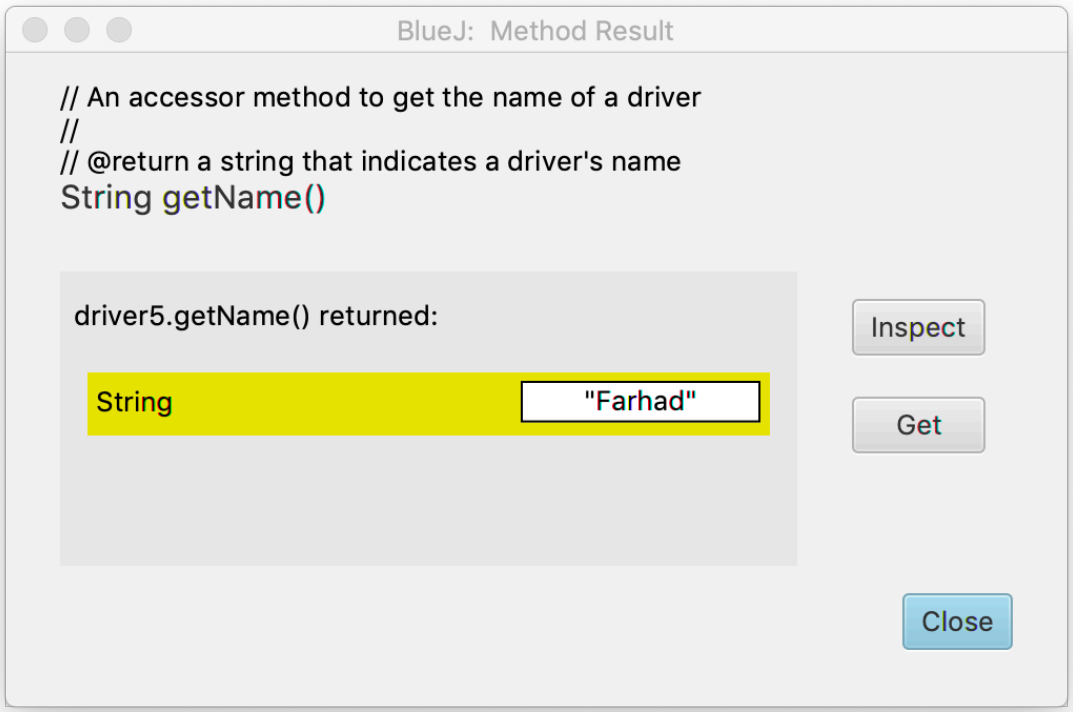
Test Data:

- no data

Expected Result:

- name: “Farhad”

Actual Result:



Test 3.B.

Test the getRanking method

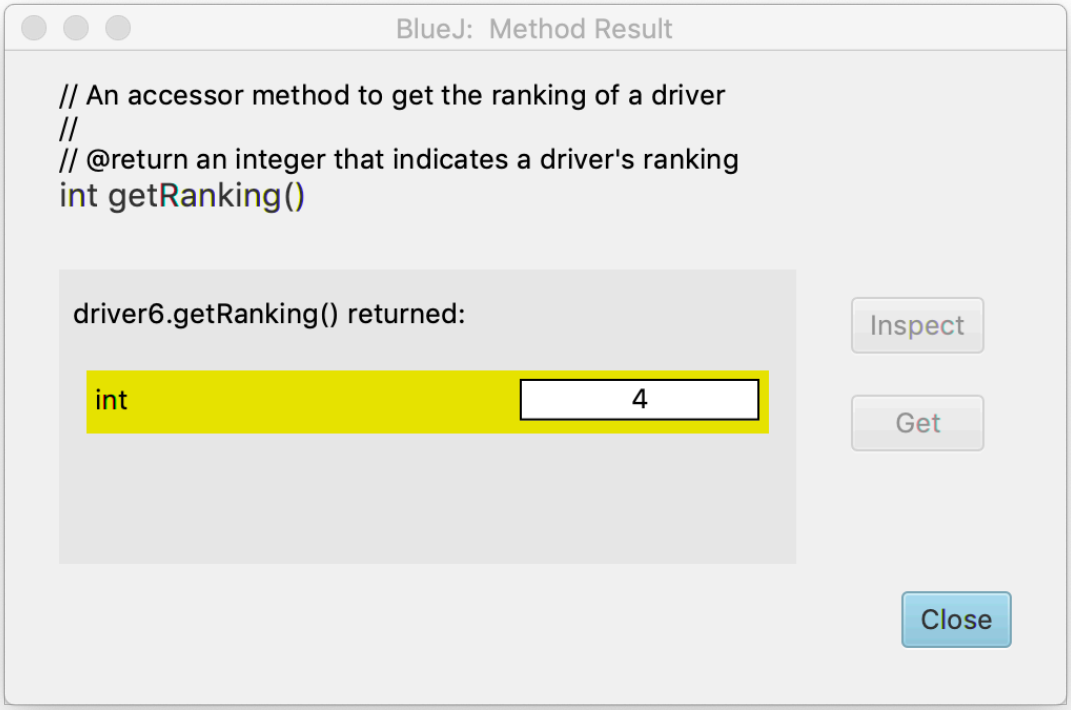
Test Data:

- no data

Expected Result:

- ranking: 4

Actual Result:



Test 3.C.

Test the getSpecialSkill method

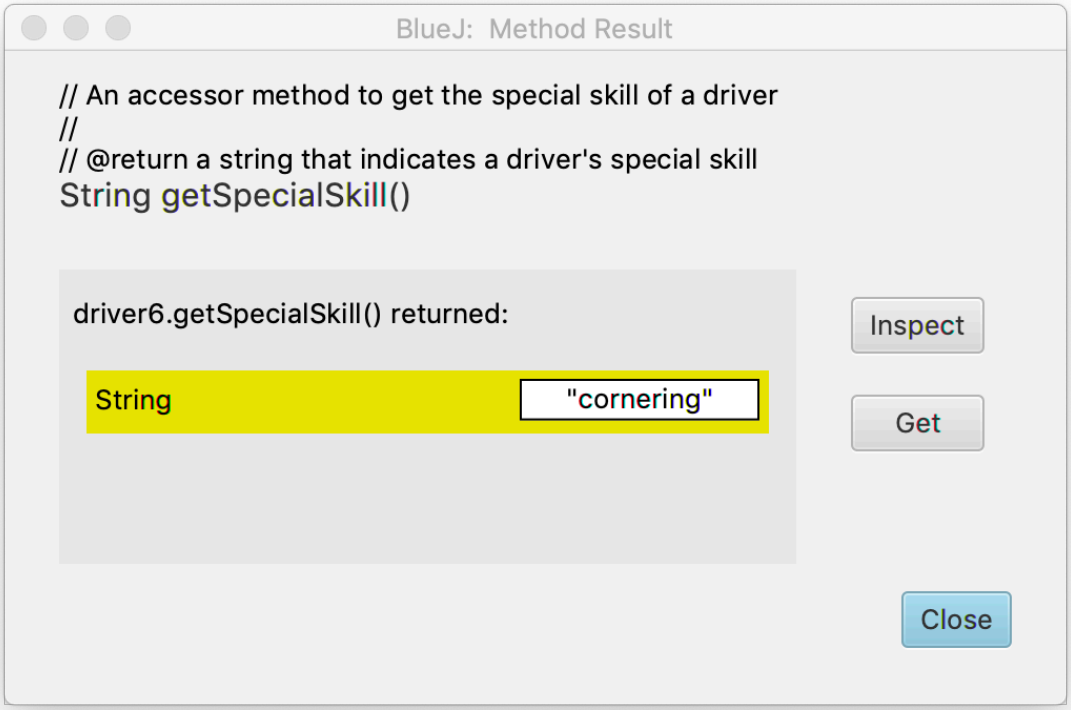
Test Data:

- no data

Expected Result:

- specialSkill: “cornering”

Actual Result:



Test 3.D.

Test the getEligibleToRace method

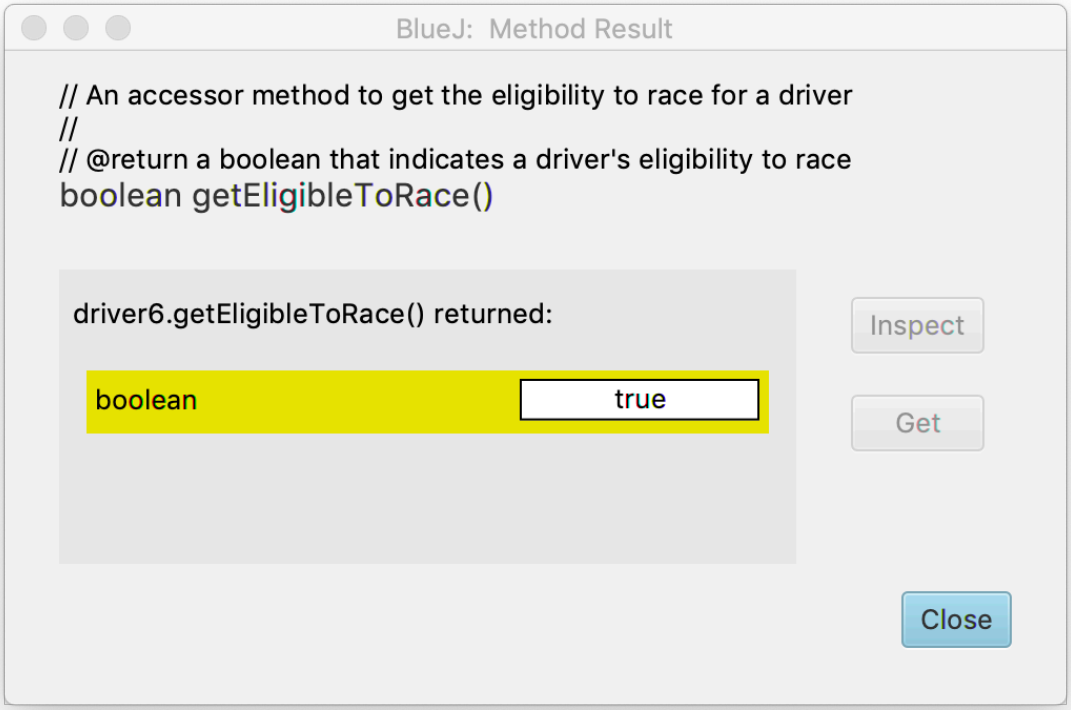
Test Data:

- no data

Expected Result:

- eligibleToRace: ture

Actual Result:



Test 3.E.

Test the getAccumulatedScore method

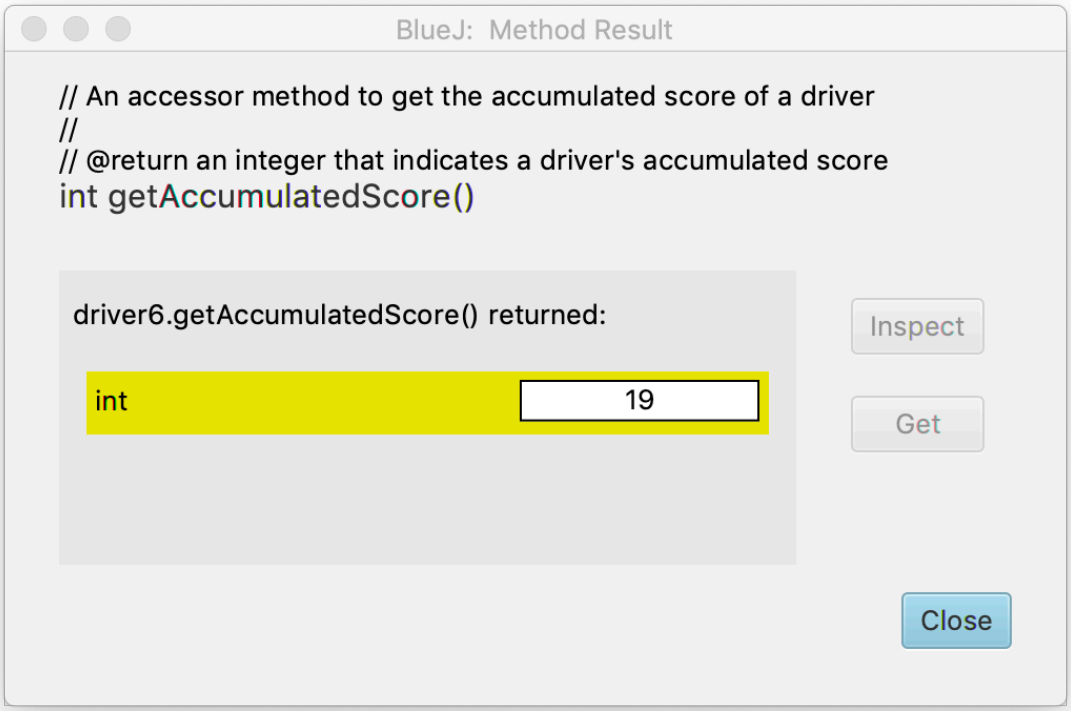
Test Data:

- no data

Expected Result:

- accumulatedScore: 19

Actual Result:



Test 3.F.

Test the getAccumulatedTime method

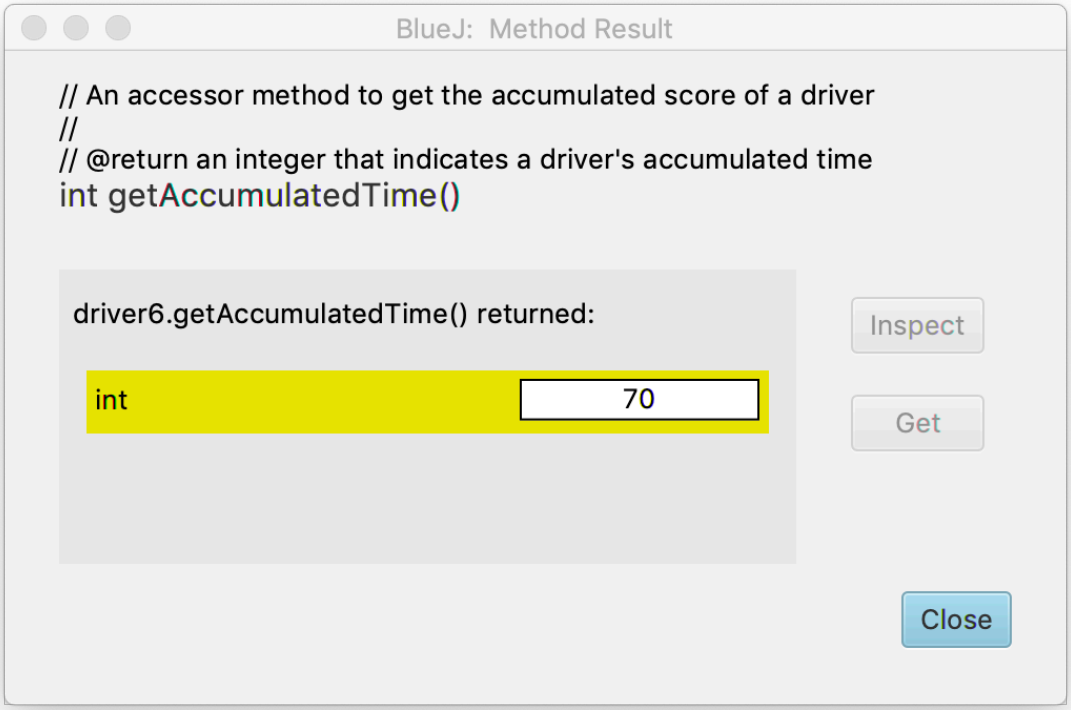
Test Data:

- no data

Expected Result:

- accumulatedTime: 70

Actual Result:



4. Test all the set methods

Test 4.A.

Test the setName method with valid argument

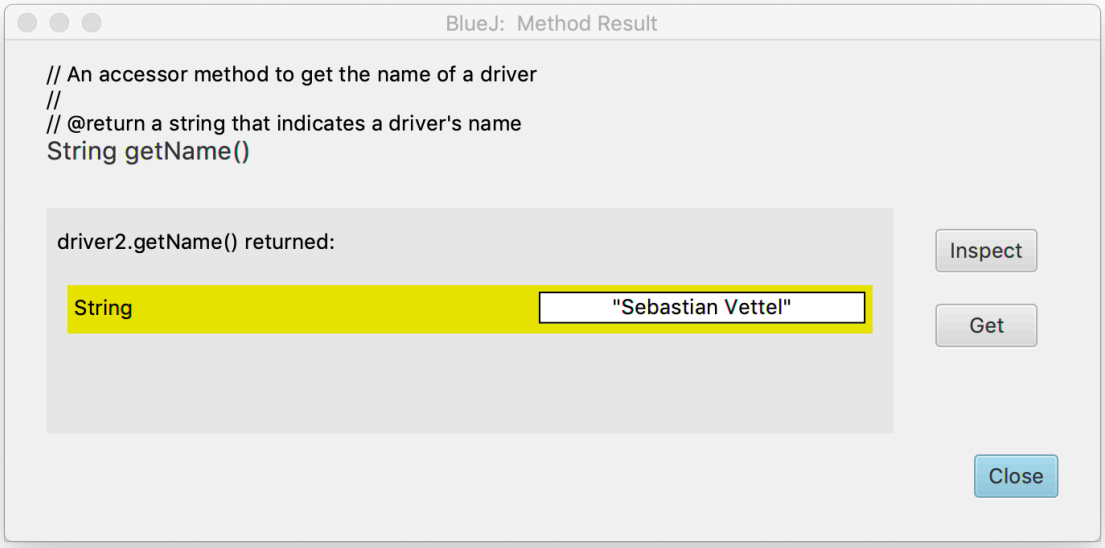
Test Data:

- name: “Sebastian Vettel”

Expected Result:

- name: “Sebastian Vettel”

Actual Result:



Test 4.B.

Test the setName method with invalid argument

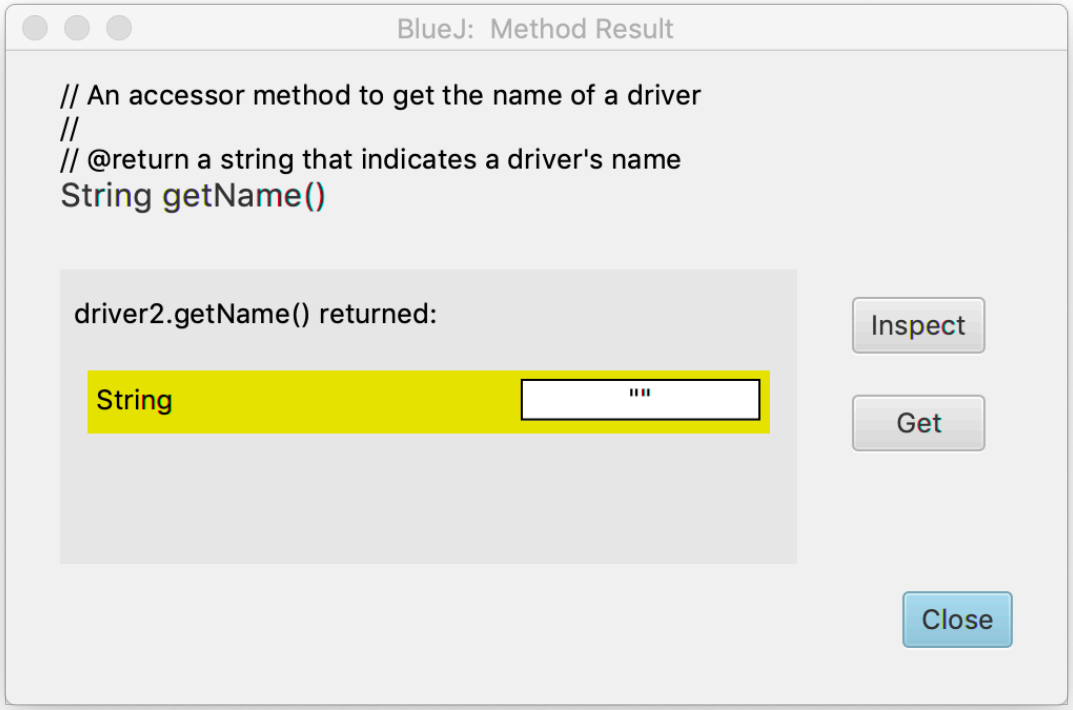
Test Data:

- name: “ ”

Expected Result:

- name: “unknown”

Actual Result:



NB: As most of the validation is done in Championship class the default values are not set

Test 4.C.

Test the setRanking method with valid argument

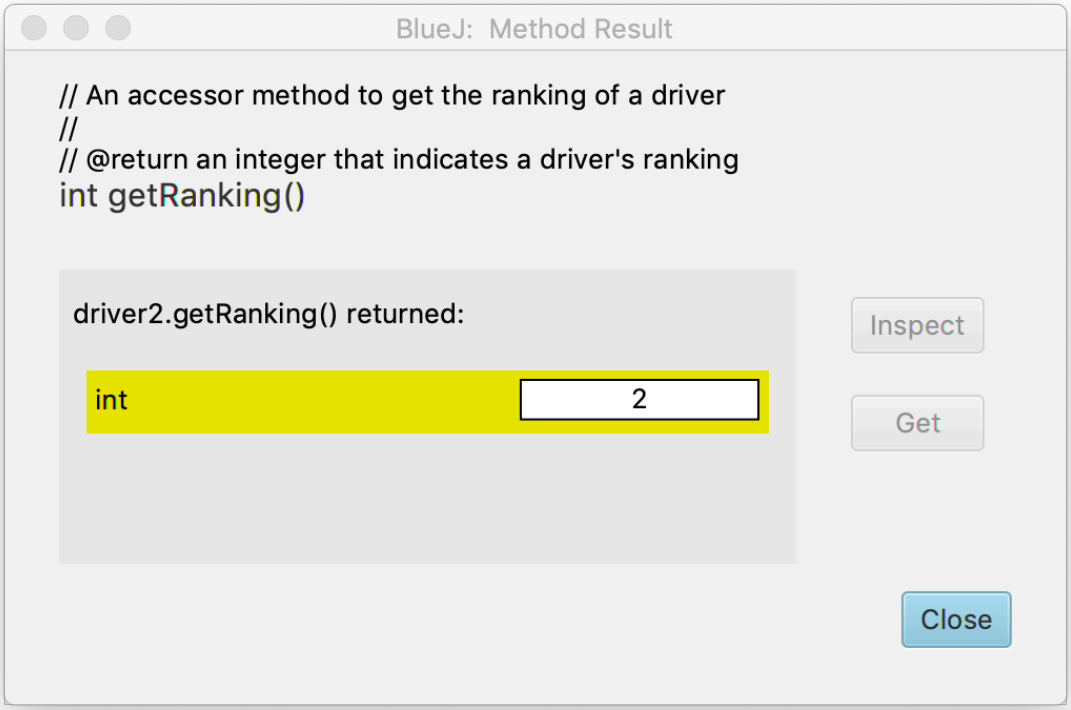
Test Data:

- ranking: 2

Expected Result:

- ranking: 2

Actual Result:



Test 4.D.

Test the setRanking method with invalid argument

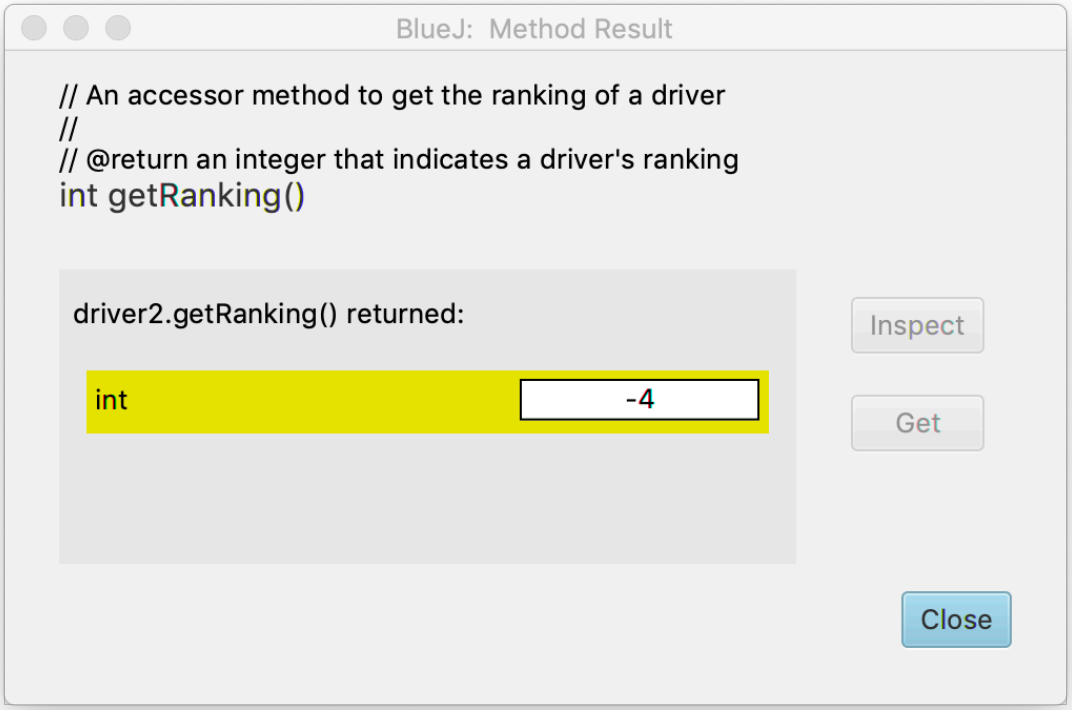
Test Data:

- ranking: -4

Expected Result:

- ranking: 0

Actual Result:



NB: As most of the validation is done in Championship class the default values are not set

Test 4.E.

Test the setSpecialSkill method with valid argument

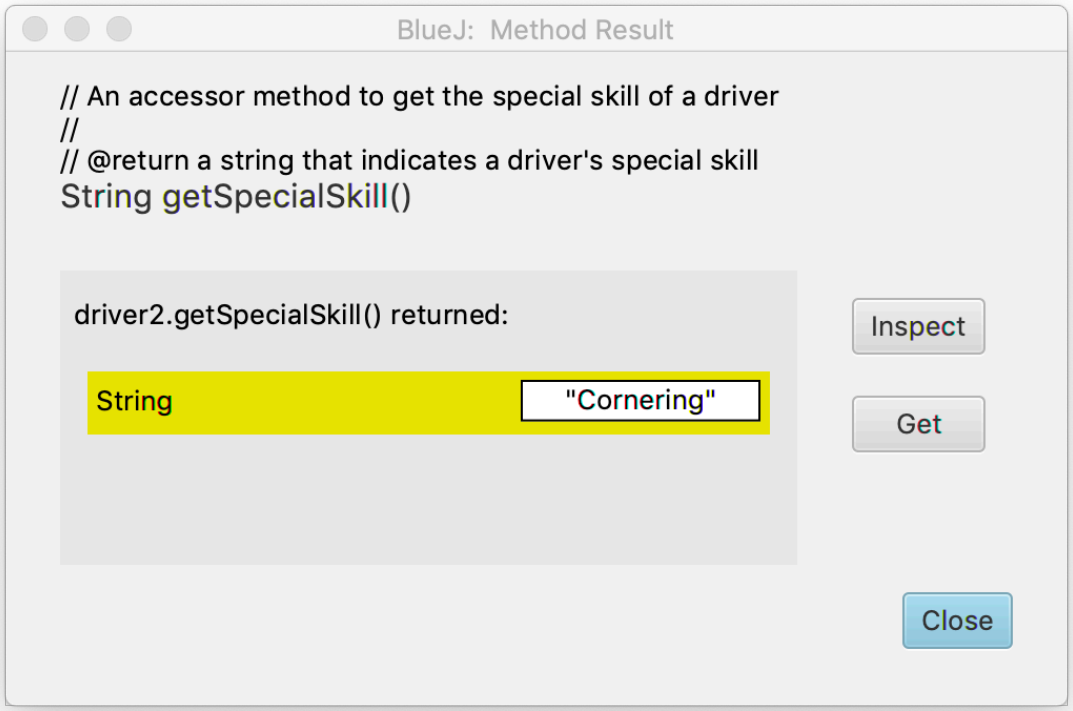
Test Data:

- specialSkill: “Cornering”

Expected Result:

- specialSkill: “Cornering”

Actual Result:



Test 4.F.

Test the setSpecialSkill method with invalid argument

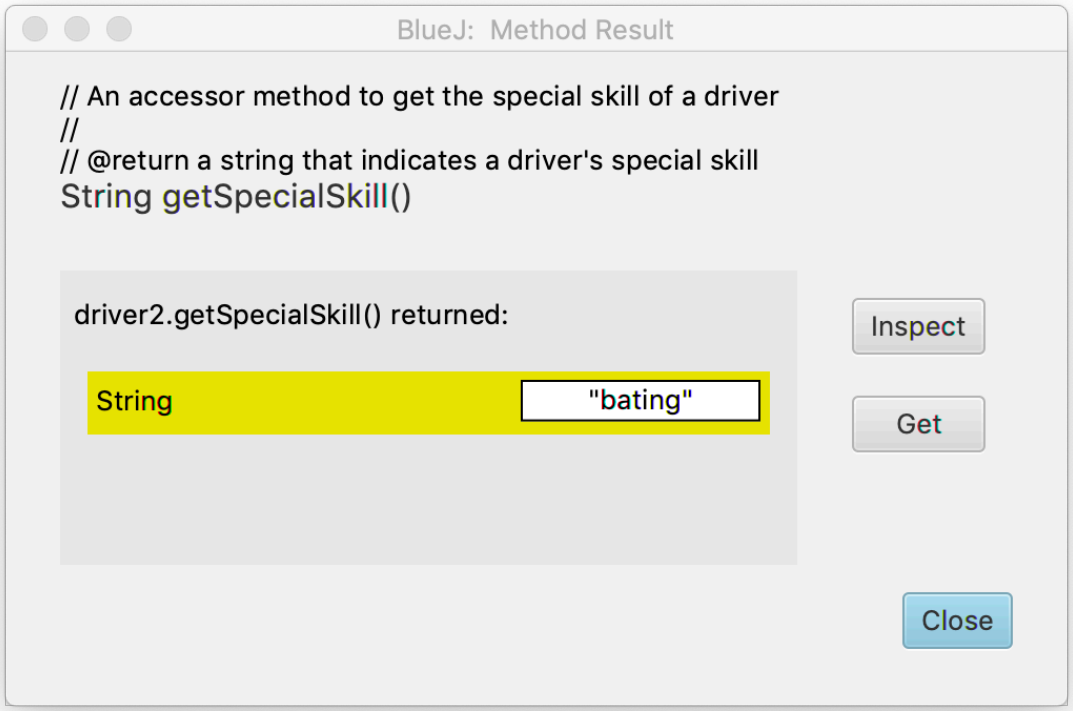
Test Data:

- specialSkill: “bating”

Expected Result:

- specialSkill: “unknown”

Actual Result:



NB: As most of the validation is done in Championship class the default values are not set

Test 4.G.

Test the setEligibleToRace method with valid argument

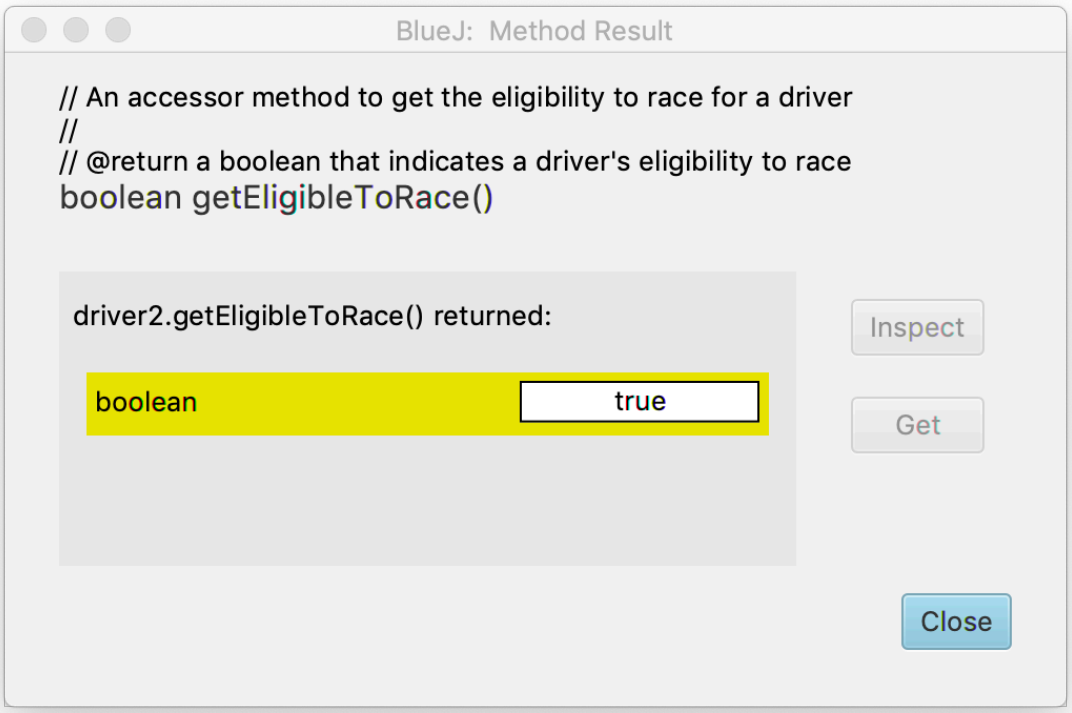
Test Data:

- eligibleToRace: ture

Expected Result:

- eligibleToRace: ture

Actual Result:



Test 4.H.

Test the setEligibleToRace method with invalid argument

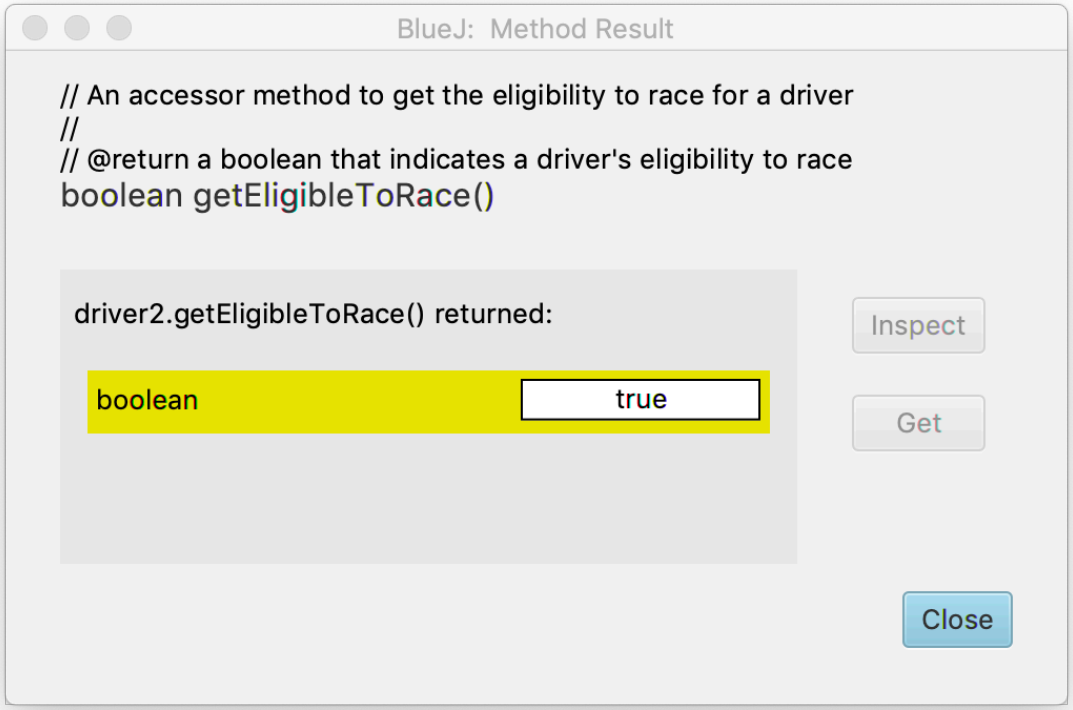
Test Data:

- eligibleToRace: ABC

Expected Result:

- eligibleToRace: ture

Actual Result:



Test 4.I.

Test the setAccumulatedScore method with valid argument

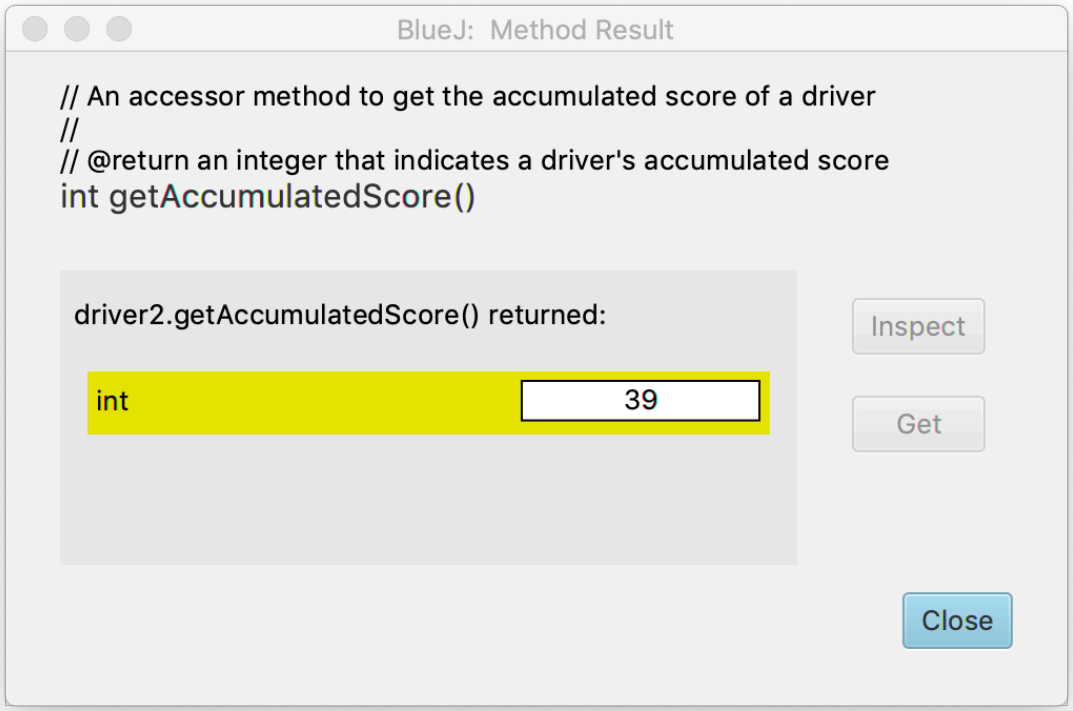
Test Data:

- accumulatedScore: 39

Expected Result:

- accumulatedScore: 39

Actual Result:



Test 4.J.

Test the setAccumulatedScore method with invalid argument

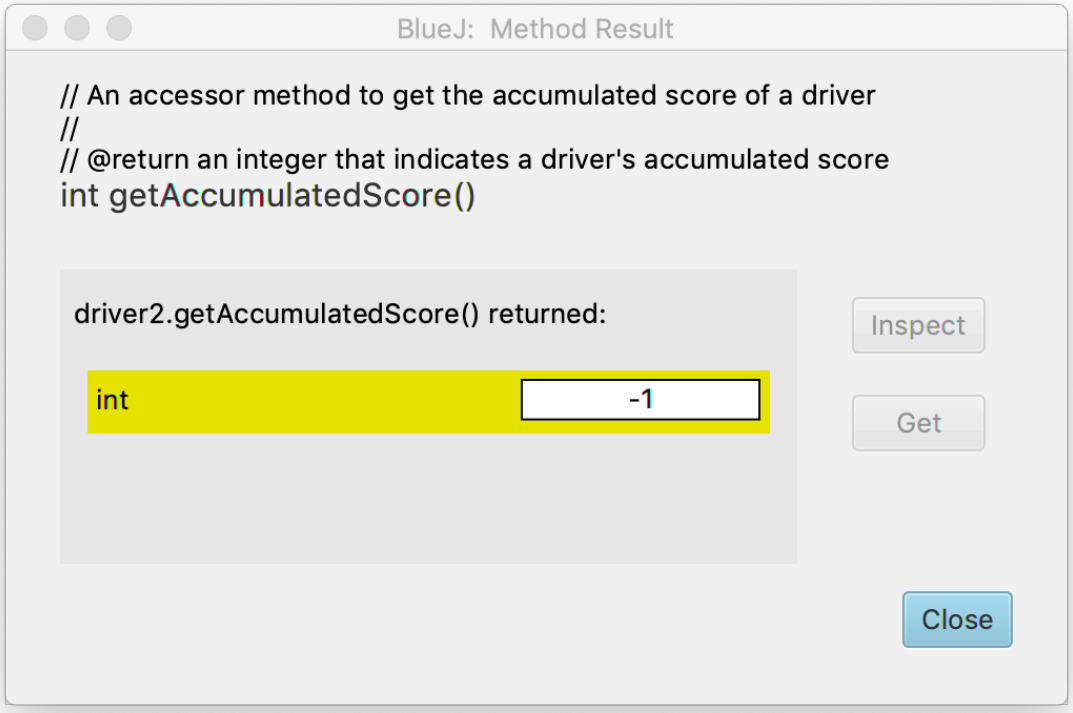
Test Data:

- accumulatedScore: -1

Expected Result:

- accumulatedScore: 0

Actual Result:



NB: As most of the validation is done in Championship class the default values are not set

Test 4.G.

Test the setAccumulatedTime method with valid argument

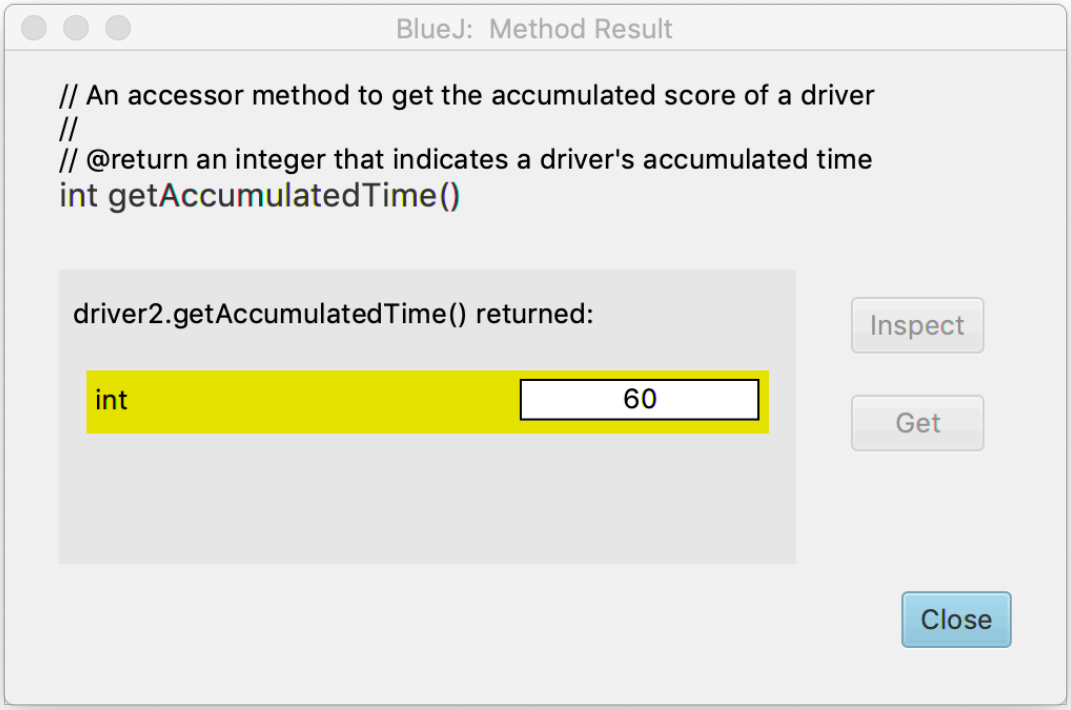
Test Data:

- accumulagtedTime: 60

Expected Result:

- accumulagtedTime: 60

Actual Result:



Test 4.H.

Test the setAccumulatedTime method with invalid argument

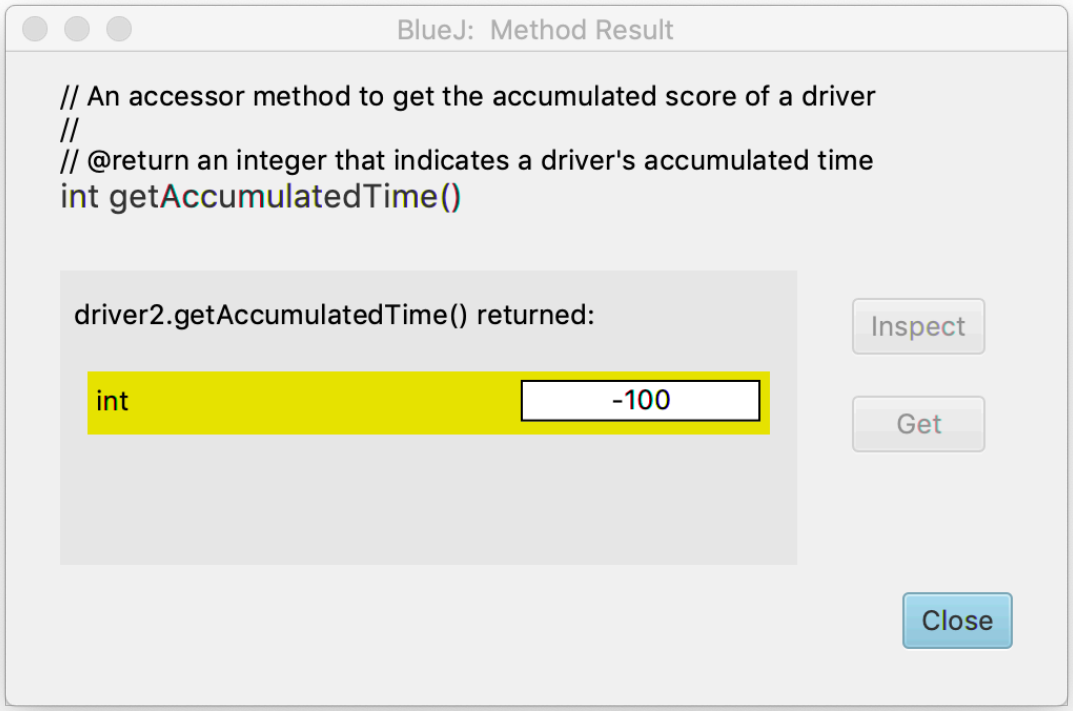
Test Data:

- accumulatedTime: -100

Expected Result:

- accumulagtedTime: 0

Actual Result:



NB: As most of the validation is done in Championship class the default values are not set

Test 5:

Test the display method

Test Data:

- no data

Expected Result:

Name of Driver: Brendon Hartley;
Ranking: 5;
Special Skill: Braking;
Eligibility to Race: true;
Accumulated Score: 89;
Accumulated Time: 70.

Actual Result:

Name of Driver: Brendon Hartley;
Ranking: 5;
Special Skill: Braking;
Eligibility to Race: true;
Accumulated Score: 89;
Accumulated Time: 70.