

Test Plan for Player class

Create a Player object with the default constructor.

Create a Player object with the non-default constructor:

- with valid field values (ex: Player("player1", "Forward", 4, 'A')
- with invalid field values (ex: Player(456, "NotAPosition", "abc", 2))

Test all get methods:

1. Test getGameBehindCount()
2. Test getGameGoalCount()
3. Test getGameKickCount()
4. Test getGamePassCount()
5. Test getGenerator()
6. Test getIsInjured()
7. Test getIsReported()
8. Test getIsReserve()
9. Test getIsStarPlayer()
10. Test getName()
11. Test getPlayerProbability()
12. Test getPosition()
13. Test getSeasonGoals()
14. Test getTeamName()

Test all set methods:

1. Test setGameBehindCount()
 - with valid field values
 - with invalid field values
2. Test setGameGoalCount()
 - with valid field values
 - with invalid field values
3. Test setGameKickCount()
 - with valid field values
 - with invalid field values
4. Test setGamePassCount()
 - with valid field values
 - with invalid field values
5. Test setGenerator()
 - with valid field values
 - with invalid field values
6. Test setIsReported()
 - with valid field values
 - with invalid field values
7. Test setIsReserve()
 - with valid field values
 - with invalid field values
8. Test setIsStarPlayer()
 - with valid field values

- with invalid field values
- 9. Test setName()
 - with valid field values
 - with invalid field values
- 10. Test setPlayerProbability()
 - with valid field values
 - with invalid field values
- 11. Test setPosition()
 - with valid field values
 - with invalid field values
- 12. Test setSeasonGoals()
 - with valid field values
 - with invalid field values
- 13. Test setTeamName()
 - with valid field values
 - with invalid field values

Test all other methods:

1. getDetails()
2. getPercentageOfEffectiveDisposals()
3. kickBall()
4. toString()

Actual Tests:

Test 1

Create a Player with the default constructor.

Test data:

name: "Unknown"
 position: "Unknown"
 seasonGoals: 0
 teamName: 'N'

Expected results:

Player name: Unknown
 Player field position: Unknown
 Player Team: N
 Player goals in this season: 0
 Star Status: false
 Is a reserve player: false
 Injury Status: false
 Reported Status: false
 Player probabilities: [0, 0, 0, 0, 0, 0, 0, 0]

Current game goals : 0

Current game behinds : 0

Current game passes : 0

Current game kicks : 0

Actual results:

```
Test 1
Player object with default constructor
Player name: Unknown
Player field position: Unknown
Player Team: N
Player goals in this season: 0
Star Status: false
Is a reserve player: false
Injury Status: false
Reported Status: false
Player probabilities: [0, 0, 0, 0, 0, 0, 0]
Current game goals : 0
Current game behinds : 0
Current game passes : 0
Current game kicks : 0
```

Test Passed

Test 2.1

Create a Player with the non-default constructor and valid parameter values.

Test data:

name: "player 1"
position: "Forward"
seasonGoals: 4
teamName: 'A'

Expected results:

Player object with non-default constructor and valid parameter values

Player name: player1

Player field position: Forward

Player Team: A

Player goals in this season: 4

Star Status: false

Is a reserve player: false

Injury Status: false

Reported Status: false

Player probabilities: [0, 0, 0, 0, 0, 0, 0]

Current game goals : 0

Current game behinds : 0

Current game passes : 0

Current game kicks : 0

Actual results:

```
Test 2.1
Player object with non-default constructor and valid parameter values
Player name: player1
Player field position: Forward
Player Team: A
Player goals in this season: 4
Star Status: false
Is a reserve player: false
Injury Status: false
Reported Status: false
Player probabilities: [0, 0, 0, 0, 0, 0, 0, 0]
Current game goals : 0
Current game behinds : 0
Current game passes : 0
Current game kicks : 0
```

Test Passed

Test 2.2

Create a Player with the non-default constructor and invalid parameter values.

Test data:

```
name: "456"
position: "NotAPosition"
seasonGoals: -1
teamName: 'Name'
```

Expected results:

```
Player object with non-default constructor and invalid parameter values
Player name: Unknown
Player field position: Unknown
Player Team: 4
Player goals in this season: 0
Star Status: false
Is a reserve player: false
Injury Status: false
Reported Status: false
Player probabilities: [0, 0, 0, 0, 0, 0, 0, 0]
Current game goals : 0
Current game behinds : 0
Current game passes : 0
Current game kicks : 0
```

Actual results:

Test 2.2

Player object with non-default constructor and invalid parameter values

Player name: Unknown

Player field position: Unknown

Player Team: 4

Player goals in this season: 0

Star Status: false

Is a reserve player: false

Injury Status: false

Reported Status: false

Player probabilities: [0, 0, 0, 0, 0, 0, 0, 0]

Current game goals : 0

Current game behinds : 0

Current game passes : 0

Current game kicks : 0

Test Passed

Test 3

Test all accessor methods

Test data:

name: "player 1"
position: "Forward"
seasonGoals: 4
teamName: 'A'

Expected results:

behind count: 0

goal count: 0

kick count: 0

pass count: 0

Generator object: This class generates random integers and integer sums.

The most recently generated random number is: -1

is injured: false

is reported: false

is reserve: false

is star: false

name: player1

[0, 0, 0, 0, 0, 0, 0, 0]

position: Forward

season goals: 4

team name: A

Actual results:

```
Test 3
behind count: 0
goal count: 0
kick count: 0
pass count: 0
Generator object: This class generates random integers and integer sums.
The most recently generated random number is: -1
is injured: false
is reported: false
is reserve: false
is star: false
name: player1
[0, 0, 0, 0, 0, 0, 0]
position: Forward
season goals: 4
team name: A
```

Test Passed

Test 4 - Test all mutator methods

Test4.1 – setGameBehindCount()

Positive Test data:

Count = 45

Expected results:

Count = 45

Actual results:

>> Count = 45

Test 4.1

Positive Test Result 45

Negative Test Result 0

Test Passed

Negative Test data:

Count = -1

Expected results:

Count = 0

Actual results:

>> Count = 0

Test Passed

Test4.2 – setGameGoalCount()

Positive Test data:

Count = 23

Expected results:

Count = 23

Actual results:

Test 4.2

Positive Test Result 23

Negative Test Result 0

>> Count = 23

Test Passed

Negative Test data:

Count = -1

Expected results:

Count = 0

Actual results:

>> Count = 0

Test Passed

Test4.3 – setGameKickCount()

Positive Test data:

Count = 5

Expected results:

Count = 5

Actual results:

>> Count = 5

Test Passed

Test 4.3

Positive Test Result 5

Negative Test Result 0

Negative Test data:

Count = -1

Expected results:

Count = 0

Actual results:

>> Count = 0

Test Passed

Test4.4 – setGamePassCount()

Positive Test data:

Count = 67

Expected results:

Count = 67

Actual results:

>> Count = 67

Test Passed

Test 4.4

Positive Test Result 67

Negative Test Result 0

Negative Test data:

Count = -1

Expected results:

Count = 0

Actual results:

>> Count = 0

Test Passed

Test4.5 – setIsInjured()

Positive Test data:

isInjured = true

Expected results:

isInjured = true

Actual results:

>> true

Test 4.5

Positive Test Result true

Test Passed

Negative Test data:

None

Test4.6 – setIsReported()

Positive Test data:

isReported= true

Expected results:

isReported = true

Actual results:

>> true

Test 4.6

Positive Test Result true

Test Passed

Negative Test data:

None

Test4.7 – setIsReserve()

Positive Test data:

isREserve = true

Expected results:

Test 4.8

Positive Test Result true

isReserve = true

Actual results:

>> true

Test Passed

Negative Test data:

None

Test4.8 – setIsStarPlayer()

Positive Test data:

setIsStarPlayer = true

Expected results:

setIsStarPlayer = true

Actual results:

>> true

Test Passed

Negative Test data:

None

Test4.9 – setName()

Positive Test data:

name: "Hello"

Expected results:

name: "Hello"

Actual results:

>> Hello

Test Passed

Negative Test data:

name: null

Expected results:

name: "Unknown"

Actual results:

>> "Unknown"

Test Passed

Test 4.9

Positive Test Result Hello

Negative Test Result Unknown

Test4.10 – setPlayerProbabilities()

Positive Test data:

playerProbabilities: {0,0,0,95,5,0,0}

Expected results:

playerProbabilities: {0,0,0,95,5,0,0}

Actual results:

>> {0,0,0,95,5,0,0}

Test 4.10

Positive Test Result: [0, 0, 0, 95, 5, 0, 0]

Test Passed

Negative Test data:

None

Test4.11 – setPosition()

Positive Test data:

position: "Midfielder"

Expected results:

isStarPlayer: "Midfielder"

Actual results:

>> Midfielder

Test 4.11

Positive Test Result: Midfielder

Negative Test Result: Unknown

Test Passed

Negative Test data:

position: "NotA Position"

Expected results:

isStarPlayer: "Unknown"

Actual results:

>> Unknown

Test Passed

Test4.12 – setSeasonGoals()

Positive Test data:

seasonGoals: 4

Expected results:

seasonGoals: 4

Actual results:

>> 4

Test Passed

Negative Test data:

seasonGoals: -1

Expected results:

seasonGoals: 0

Actual results:

>> 0

Test Passed

Test 4.12

Positive Test Result: 4

Negative Test Result: 0

Test4.13 – setTeamName()

Positive Test data:

teamName: 'B'

Expected results:

teamName: 'B'

Actual results:

>> B

Test Passed

Negative Test data:

teamName: null

Expected results:

teamName: 'Unknown'

Actual results:

>> Unknown

Test Passed

Test 4.13

Positive Test Result: Team B

Negative Test Result: Unknown

Test 5

Test remaining methods:

1. getDetails()

2. getPercentageOfEffectiveDisposals()

3. toString()

Expected:

Unknown (Unknown, Unknown)

0.0

Player name: Unknown

Player field position: Unknown

Player Team: Unknown

Player goals in this season: 0

Star Status: true

Is a reserve player: true

Injury Status: true

Reported Status: true

Player probabilities: [0, 0, 0, 95, 5, 0, 0]

Current game goals : 0

Current game behinds : 0

Current game passes : 0

Current game kicks : 0

Test 5

Unknown (Unknown, Unknown)

0.0

Player name: Unknown

Player field position: Unknown

Player Team: Unknown

Player goals in this season: 0

Star Status: true

Is a reserve player: true

Injury Status: true

Reported Status: true

Player probabilities: [0, 0, 0, 95, 5, 0, 0]

Current game goals : 0

Current game behinds : 0

Current game passes : 0

Current game kicks : 0

Test Passed

