

Because Player class is an abstract class in my design, an instance of Player can not be created directly. Instead, I will create an instance of Player's subclass, for example, Forward class.

### Test Plan

1. Create a Forward object with the default constructor.
2. Create a Forward object with the first non-default constructor:
  - with valid field values
  - with invalid field values
3. Create a Forward object with the second non-default constructor:
  - with valid field values
  - with invalid field values
4. Test display/toString method.
5. Test all get methods:
  - Test getBehinds()
  - Test getFieldPosition()
  - Test getGoals()
  - Test getIsInjured()
  - Test getIsReported()
  - Test getIsStar()
  - Test getKicks()
  - Test getPass()
  - Test getPlayerName()
  - Test getSeasonGoals()
  - Test getTeam()
6. Test all set methods:
  - Test setBehinds()
    - with valid field values
    - with invalid field values
  - Test setFieldPosition()
    - with valid field values
    - with invalid field values
  - Test setGoals()
    - with valid field values
    - with invalid field values
  - Test setIsInjured()
    - with valid field values
    - with invalid field values
  - Test setIsReported()
    - with valid field values
    - with invalid field values
  - Test setIsStar()
    - with valid field values
    - with invalid field values

- Test setKicks()
  - with valid field values
  - with invalid field values
- Test setPass()
  - with valid field values
  - with invalid field values
- Test setPlayerName()
  - with valid field values
  - with invalid field values
- Test setSeasonGoals()
  - with valid field values
  - with invalid field values
- Test setTeam()
  - with valid field values
  - with invalid field values

7. Test other methods:

- Test addABehind()
- Test addAGoal()
- Test addAKick()
- Test addAPass()
- Test calculatePercent()
- Test getReported()
- Test getInjured()

## The actual tests

### Test 1

Create a Forward object with the default constructor.

Test data:

Expected results:

playerName: "default name"  
fieldPosition: "default position"  
seasonGoals: 0  
team: null  
kicks: 0  
goals = 0  
behinds = 0  
pass = 0  
isStar: false  
isInjured: false  
isReported: false

Actual results:

```
Create a Forward object with the default constructor
playerName    : default name
fieldPosition: default position
seasonGoals   : 0
team          : null
kicks         : 0
goals         : 0
behinds       : 0
pass          : 0
isStar        : false
isInjured     : false
isReported    : false
```

Test passed!

**Test 2.1**

Create a Forward object with the first non-default constructor with valid field values.

Test data:

playerName: "playerA1"  
fieldPosition: "Forward"  
seasonGoals: 0  
team: null  
kicks: 0  
goals = 0  
behinds = 0  
pass = 0  
isStar: false  
isInjured: false  
isReported: false

Expected results:

playerName: "playerA1"  
fieldPosition: "Forward"  
seasonGoals: 0  
team: null  
kicks: 0  
goals = 0  
behinds = 0  
pass = 0  
isStar: false  
isInjured: false  
isReported: false

Actual results:

Create a Forward object with the first non-default constructor with valid field values

```
playerName    : playerA1
fieldPosition  : Forward
seasonGoals    : 0
team           : null
kicks          : 0
goals          : 0
behinds        : 0
pass           : 0
isStar         : false
isInjured      : false
isReported     : false
```

Test passed!

**Test 2.1 b.1**

Create a Forward object with the first non-default constructor with invalid field values.

Test data:

playerName: null  
fieldPosition: "Forward"  
seasonGoals: 0  
team: null  
kicks: 0  
goals = 0  
behinds = 0  
pass = 0  
isStar: false  
isInjured: false  
isReported: false

Expected results:

“Name cannot be null or empty”

Actual results:

Create a Forward object with the first non-default constructor with invalid field values  
Name cannot be null or empty

Test passed!

**Test 2.2**

Create a Forward object with the second non-default constructor with valid field values.

Test data:

playerName: “playerA1”  
fieldPosition: “Forward”  
seasonGoals: 0  
team: null

Expected results:

playerName: “playerA1”  
fieldPosition: “Forward”  
seasonGoals: 0  
team: null  
kicks: 0  
goals = 0  
behinds = 0  
pass = 0  
isStar: false  
isInjured: false  
isReported: false

Actual results:

Create a Forward object with the second non-default constructor with valid field values

```
playerName : playerA1
fieldPosition: Forward
seasonGoals : 0
team : null
kicks : 0
goals : 0
behinds : 0
pass : 0
isStar : false
isInjured : false
isReported : false
```

Test passed!

### **Test 2.2 b.1**

Create a Forward object with the second non-default constructor with invalid field values.

#### **Test data:**

```
playerName: null
fieldPosition: "Forward"
seasonGoals: 0
team: null
```

#### **Expected results:**

"Name cannot be null or empty"

#### **Actual results:**

```
Create a Forward object with the second non-default constructor with invalid field values
Name cannot be null or empty
```

Test passed!

### **Test 2.3**

Test display method.

#### **Test data:**

```
playerName: "playerA1"
fieldPosition: "Forward"
seasonGoals: 0
team: null
kicks: 0
goals = 0
behinds = 0
```

pass = 0  
isStar: false  
isInjured: false  
isReported: false

Expected results:

playerName: "playerA1"  
fieldPosition: "Forward"  
seasonGoals: 0  
team: null  
kicks: 0  
goals = 0  
behinds = 0  
pass = 0  
isStar: false  
isInjured: false  
isReported: false

Actual results:

```
Test display method
playerName    : playerA1
fieldPosition: Forward
seasonGoals   : 0
team          : null
kicks         : 0
goals         : 0
behinds       : 0
pass          : 0
isStar        : false
isInjured     : false
isReported    : false
```

Test passed!

**Test 2.4**

Test getPlayerName method.

Test data:

playerName: "playerA1"

Expected results:

playerName: "playerA1"

Actual results:

```
Test getPlayerName method  
playerName: playerA1  
Test passed!
```

**Test 2.5**

Test setPlayerName method with valid values.

Test data:

playerName: "playerA1"

Expected results:

Argument is valid: true

Actual results:

```
Test setPlayerName method with valid argument  
Argument is valid: true  
Test passed!
```

**Test 2.5 b.1**

Test setPlayerName method with invalid values.

Test data:

playerName: null

Expected results:

Argument is valid: false

Actual results:

```
Test setPlayerName method with invalid argument  
Argument is valid: false  
Test passed!
```