

Test plan

1. Create a Bilby object with the default constructor.
2. Create a Bilby object with the non-default constructor:
 - with valid field values
 - with invalid field values
3. Test all get methods
 - Test getAlive()
 - Test getBilbyNo()
 - Test getLocationNo()
4. Test all set methods
 - Test getAlive()
 - with valid field values
 - with invalid field values
 - Test getBilbyNo()
 - with valid field values
 - with invalid field values
 - Test getLocationNo()
 - with valid field values
 - with invalid field values

The actual tests

Test 1.

Create a Bilby object with the default constructor with valid field values.

Test data:

BilbyNo:	"B000"
Bilby's location:	0
Bilby is alive:	false

Expected results:

BilbyNo:	"B000"
Bilby's location:	0
Bilby is alive:	false

Actual results:

```
Create a Bilby object with the default constructor
BilbyNo: B000
Bilby's location: 0
Bilby is alive: false
```

Test Passed!

Test 2.1

Create a Bilby object with the non-default constructor.

Test data:

BilbyNo:	"B001"
Bilby's location:	2
Bilby is alive:	true

Expected results:

BilbyNo:	"B001"
Bilby's location:	2
Bilby is alive:	true

Actual results:

```
Test 2.1b.1: Create a Bilby object with the non-default constructor with valid field values
BilbyNo: B001
Bilby's location: 2
Bilby is alive: true
```

Test Passed!

Test 2.1b.1

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

Test data:

BilbyNo:	""
Bilby's location:	10
Bilby is alive:	true

Expected results:

Show an error reminder message to the user.

Actual results:

```
Test 2.1b.2: Create a Bilby object with the non-default constructor with invalid field values
Exception in thread "main" java.lang.IllegalArgumentException: Bilby code cannot be null or empty
    at Bilby.<init>(Bilby.java:17)
    at Bilby.test(Bilby.java:81)
    at Bilby.main(Bilby.java:51)
```

Test Passed!

Method not validating length and format of BilbyNo and value of Bilby's location correctly.

Test 2.1b.2

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

Test data:

BilbyNo:	"C001"
Bilby's location:	-1

Bilby is alive: true

Expected results:

Show an error reminder message to the user.

Actual results:

```
Create a Bilby object with the non-default constructor with invalid field values
Exception in thread "main" java.lang.IllegalArgumentException: Bibly location number cannot be less than 0
    at Bilby.<init>(Bilby.java:21)
    at Bilby.test(Bilby.java:87)
    at Bilby.main(Bilby.java:53)
```

Test Passed!

Test 3.1

Test getAlive() with the default value

Test data:

Bilby is alive: false

Expected results:

Bilby is alive: false

Actual results:

```
Test getAlive() with the default value
getAlive(): false
```

Test Passed!

Test 3.2

Test getBilbyNo() with the default value

Test data:

BilbyNo: "B000"

Expected results:

BilbyNo: "B000"

Actual results:

```
Test getBilbyNo() with the default value
getBilbyNo(): B000
```

Test Passed!

Test 3.3

Test getBilby's location() with the default value

Test data:

Bilby's location: 0

Expected results:

Bilby's location: 0

Actual results:

```
Test getLocationNo() with the default value  
getLocationNo(): 0
```

Test Passed!

Test 4.1

Test setBilby is alive() with the valid field values

Test data:

Bilby is alive: true

Expected results:

Bilby is alive: true

Actual results:

```
Test setAlive() with valid field values  
setAlive(): true
```

Test Passed!

Test 4.1b.1

Test setBilby is alive() with the invalid field values

Test data:

Bilby is alive: "abc"

Expected results:

Show an error reminder message to the user.

Actual results:

```
Bilby.java:115: error: incompatible types: String cannot be converted to boolean  
    bil9.setAlive("abc");  
              ^
```

Note: Some messages have been simplified; recompile with -Xdiags:verbose to get full output
1 error

Test FAILED!

Program crash and no message to let user input again.

Test 4.2

Test setBilbyNo() with the valid field values

Test data:

BilbyNo: "B008"

Expected results:

BilbyNo: "B008"

Actual results:

```
Test setBilbyNo() with valid field values
setBilbyNo(): B008
```

Test Passed!

Test 4.2b.1

Test setBilbyNo() with the invalid field values

Test data:

BilbyNo: ""

Expected results:

Show an error reminder message to the user.

Actual results:

```
Test setBilbyNo() with invalid field values
Exception in thread "main" java.lang.IllegalArgumentException: Bibly code cannot be null or empty
    at Bilby.setBilbyNo(Bilby.java:64)
    at Bilby.test(Bilby.java:125)
    at Bilby.main(Bilby.java:53)
```

Test Passed!

Test 4.3

Test setBilby's location() with the valid field values

Test data:

Bilby's location: 2

Expected results:

Bilby's location: 2

Actual results:

```
Test setLocationNo() with the valid field values
setLocationNo(): 2
```

Test Passed!

Test 4.3b.1

Test setBilby's location() with the invalid field values

Test data:

Bilby's location: 12

Expected results:

Show an error reminder message to the user.

Actual results:

```
Test setLocationNo() with invalid field values
Exception in thread "main" java.lang.IllegalArgumentException: Bibly location number cannot be more than 10
    at Bilby.setLocationNo(Bilby.java:72)
    at Bilby.test(Bilby.java:135)
    at Bilby.main(Bilby.java:53)
```

Test Passed!