



Practice **Unit Testing With JUnit**



Exercises

- Practice 1: Aquarium Water pH Value
- Practice 2: Reverse Digit

An illustration of a woman and a man sitting at a desk, working together. The woman, on the left, has dark hair and wears glasses and a red top. The man, on the right, has brown hair and wears glasses and an orange top. They are both looking at a large blue computer monitor. On the desk, there is a yellow folder, a white coffee cup with a red lid, a yellow pencil, and a notepad with a red pencil. The background is light green with some abstract shapes and a large green plant on the right.

PRACTICE

Practice 1: Aquarium Water pH Value

The chemical formula of water is H_2O (2 hydrogen atoms + 1 oxygen atom). The term pH is a measure of the hydrogen concentration in water. The pH value ranges from 0-14, with 0 being the most acidic and 14 the most alkaline (basic). Neutral water has a pH of 7.

For a goldfish to survive in an aquarium, pH must range from 7-8. The pH value of an aquarium may change from time to time.

Write test cases for the solution provided.

Practice 1: Tasks

- Create the test cases in the `PhLevelAnalyserTest` class created in the test package.
- Initialize the object of the `PhLevelAnalyser` class in the `setUp()` method, that will be called before the execution of every test case.
- Set the object of `PhLevelAnalyser` class initialized in setup method to null in the `tearDown()` method, this will be called after execution of every test case.
- Create the following test cases in the `PhLevelAnalyserTest` class created in the test package.
 - `public void getPhValueOfWaterForInputPhSeven() {}`
 - `public void getPhValueOfWaterForInputPhEight() {}`
 - `public void getPhValueOfWaterForInputPhTen() {}`

An illustration of a woman with dark hair and glasses, wearing a red top, and a man with brown hair and glasses, wearing an orange top. They are sitting at a desk with a large blue computer monitor. The woman is holding a yellow clipboard. On the desk, there is a coffee cup with a red and white design, a yellow pencil, and a red pencil. The background is light green with some abstract shapes and a small plant on the right.

PRACTICE

Practice 2: Reverse Digits

Ron and Steve are playing a reverse number game where one gives an integer to the other and the person receiving the integer reverses the number and displays the output.

If either of them fails to reverse the number, the game ends.

Write test cases for the solution provided.

Practice 2: Tasks

- Create the test cases in the `ReverseDigitTest` class created in the test package.
- Initialize the object of the `ReverseDigit` class in the `setUp()` method, that will be called before the execution of every test case.
- Set the object of `ReverseDigit` class initialized in the setup method to null in the `tearDown()` method, this will be called after execution of every test case.
- Create the below test cases in the `ReverseDigitTest` class created in the test package.
 - `public void givenInputPositiveNumberReverseTheDigit() {}`
 - `public void givenInputNegativeNumberReverseTheDigit() {}`