Solution Review: Letter Grade to GPA

In this review, solution of the challenge 'Letter Grade to GPA' from the previous lesson is provided.

We'll cover the following

- Solution: Is your GPA correct?
- Understanding your Code

Solution: Is your GPA correct?

```
class gpaHelper{

    public static double letterToGPA (String grade) {
        double answer;

        switch (grade) {
            case "A+":
            case "A":
                answer = 4;
                break;

            case "A-":
                answer = 3.7;
                break;

            case "B+":
                answer = 3.3;
                break;

            case "B":
                answer = 3;
                break;

            case "B-":
                answer = 2.8;
                break;

            case "C+":
                answer = 2.5;
                break;

            case "C":
                answer = 2.0;
                break;

            case "C-":
                answer = 1.8;
                break;
```

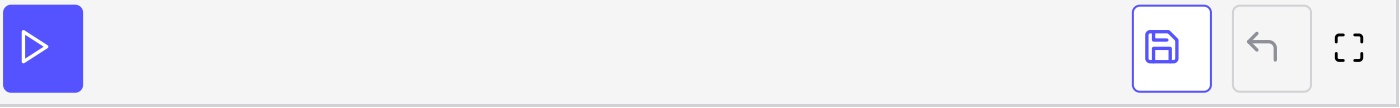
```
            case "D":
                answer = 1.5;
                break;

            case "F":
                answer = 0;
                break;

            default:
                answer = -1;
        }

        return answer;
    }
 public static void main( String args[] ) {
        System.out.println("Grade A: " + letterToGPA("A"));
        System.out.println("Grade D: " + letterToGPA("D"));
        System.out.println("Grade L: " + letterToGPA("L"));
    }

}
```



Understanding your Code

Line 3

- The method `letterToGPA` is declared **static** so it can be called without creating an object.
- The method takes in a **single** argument which is of type *String* and return *double* value in the output.

Line 4: A **double** type variable `answer` is declared which will store the final GPA point.

> **Note:** We have chosen to use `switch` statements instead of an if condition for code brevity. We can also use `if-then-else` block.

Lines 6-46:

- This statement is the start of the **switch** statement block.
- The argument in the round brackets, `()`, is the variable which will be equated in the following *cases*. We check the value of `grade` against each case until the `grade` matches the particular case value. Once the value matches, we will set

the value of `answer` accordingly and come out of the loop immediately.

Lines 48-49

- This is a special *case*.
- The **default** case states that provided that **no other** condition is met, this is what should be done.
- In the problem statement above, we are told that if **any other** grade is given, the output should be `-1` so that an incorrect grade can be detected.
- This can be seen in Line 49 where the variable **answer** is equated to `-1`.

Line 53

- The `answer` variable is returned to the main method calling it.

In the next lesson, we will solve one more challenge related to methods.