

Homework 2

Test Driven Development

Due Monday, October 7, 2019

1. Problems:

Use Test Driven Development to develop Java test classes `GradeConverterTest` and Java class `GradeConverter` on Eclipse Java development environment. You should develop class `GradeConverterTest` *before* class `GradeConverter`. You should also use the *code assist* (CTRL+Space) feature and the *quick fix* (CTRL+1) feature of Eclipse as many as possible.

The specification of the class `GradeConverter` is as follows:

```
class GradeConverter {  
    public GradeConverter();  
    public String convert(int grade) throws IllegalArgumentException;  
}
```

Each object of class `GradeConverter` denotes a converter from a numeric grade (0~100) to a letter grade (A, B, C, D, and F).

The constructor `GradeConverter()` creates an object of class `GradeConverter`.

The method `convert(int grade)` returns a corresponding letter grade based on the numeric grade argument `grade`. The value of the argument `grade` should be an integer between 0 and 100. The method should throw an `IllegalArgumentException` if the value of the argument `grade` is less than 0 or greater than 100. The conversion is based on the following table

Numeric grade	Letter grade
90~100	A
80~89	B
70~79	C
60~69	D
0~59	F

For example, the method will convert the numeric grade 95 to the letter grade A and the numeric grade 50 to the letter grade F.

You don't have to write a main method in this homework. You should write comments in each test method in the test class to describe the test cases you design.

2. Handing in your homework:

You should upload a compressed file hw2.zip that contains the package that contains both the source class and the test class to the eCourse2 website.