Software Engineering Process **Amit Sachdeva**
Topic: **Deliverable 3 Code Review Question 5** **40084627**
Prof. P. Kamthan Due Date: 02/August/2019
My github Id: `https://github.com/amitsachdeva45/SEPPersonal/`

Code Review of Function 6 ab^x

Peer Details:

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1 Introduction

This project is about making a calculator for a function of ab^x. It should take a input from user and retrieve the result as accurate as possible. It must have exception as well as error handling keeping in mind the domain of the function. Users of this function are mostly mathematicians and even scientists, so it should also keep in mind the proper user interaction.

2 Objective

Objective of this review to check if the developer had used proper coding standards, proper quality tools. Addition to this, he/she had written every function from scratch without using any inbuilt function. The most important thing is to check the efficiency and maintainability of code.

3 Code review Approach

4 User Interface/Usability

Textual User interface (TUI) is used for working of the project, and user can select one of the option out of 5 options on command line for example addition, subtraction, multiplication, division and exponential. User can do any operation only once, after that it need to be restart.

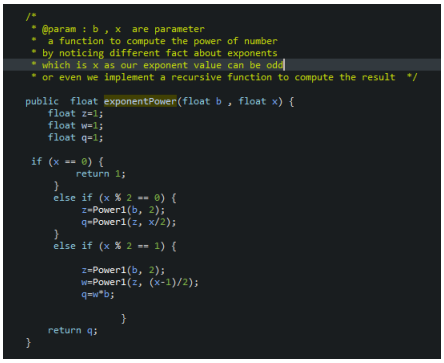
5 Coding Style

5.1 Functions/Methods

Coding Standards is properly used for writing Methods for example lowerCamelCase is used for declaring methods name with proper using access modifiers where needed as shown in figure 1. Along with that, naming of each method is properly clarifying its functionality and each method is handling only one task according to the defined coding standards.
Improvements: One thing can be improved in only main method by reducing the length of method as it is exceeding the defined number of lines of code i.e. approximately 25-40 lines per each method.

5.2 Local Variables, Class Variables

All local variables are properly lowerCamelCase, and class variables are named properly defining its meaning with proper access modifiers i.e private and specifiers i.e. static, and final.
Improvements: All constant variables should be in **capital case** which can help in differentiating them for other class variables but few constant variables are written in lower case.



```
/*
 * @param : b , x  are parameter
 *  a function to compute the power of number
 * by noticing different fact about exponents
 * which is x as our exponent value can be odd
 * or even we implement a recursive function to compute the result  */

public  float exponentPower(float b , float x) {
    float z=1;
    float w=1;
    float q=1;

 if (x == 0) {
        return 1;
    }
    else if (x % 2 == 0) {
         z=Power1(b, 2);
         q=Power1(z, x/2);
    }
    else if (x % 2 == 1) {

         z=Power1(b, 2);
         w=Power1(z, (x-1)/2);
         q=w*b;

              }
    return q;
}
```

Figure 1: Proper declaration of methods names and Java docs

5.3 Documentation, Class declaration

Java docs is used properly by giving proper description of every public method, explaining about every parameter passed in function and return type as shown in figure 1. Class is declared properly according to the coding standards.

5.4 Error Handling/Robust

6 Code quality

7 Maintainability

8 Final conclusion

9 References