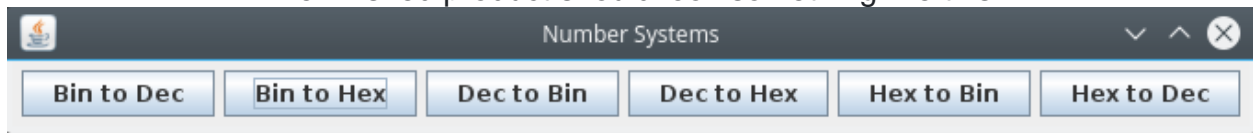


## Assignment 1: [15 points]

- Assignment Link: <https://classroom.github.com/a/sHrzlV3C> (Links to an external site.)
- Specs: [https://docs.google.com/document/d/e/2PACX-1vQl4OPIjYn6L4enAA7OGNGfC7ncMLUqYrHpx1-EbCGymVYr\\_pyh7RVhw72N080OWIeUJJ6iRDEAGemy/pub](https://docs.google.com/document/d/e/2PACX-1vQl4OPIjYn6L4enAA7OGNGfC7ncMLUqYrHpx1-EbCGymVYr_pyh7RVhw72N080OWIeUJJ6iRDEAGemy/pub) (Links to an external site.)
- On completion of the assignment, submit a link to your Github repository.
- Check Resources for conversion methods for number systems.

The goal of this project is to create a simple number system conversion app using Swing.

The finished product should look something like this:

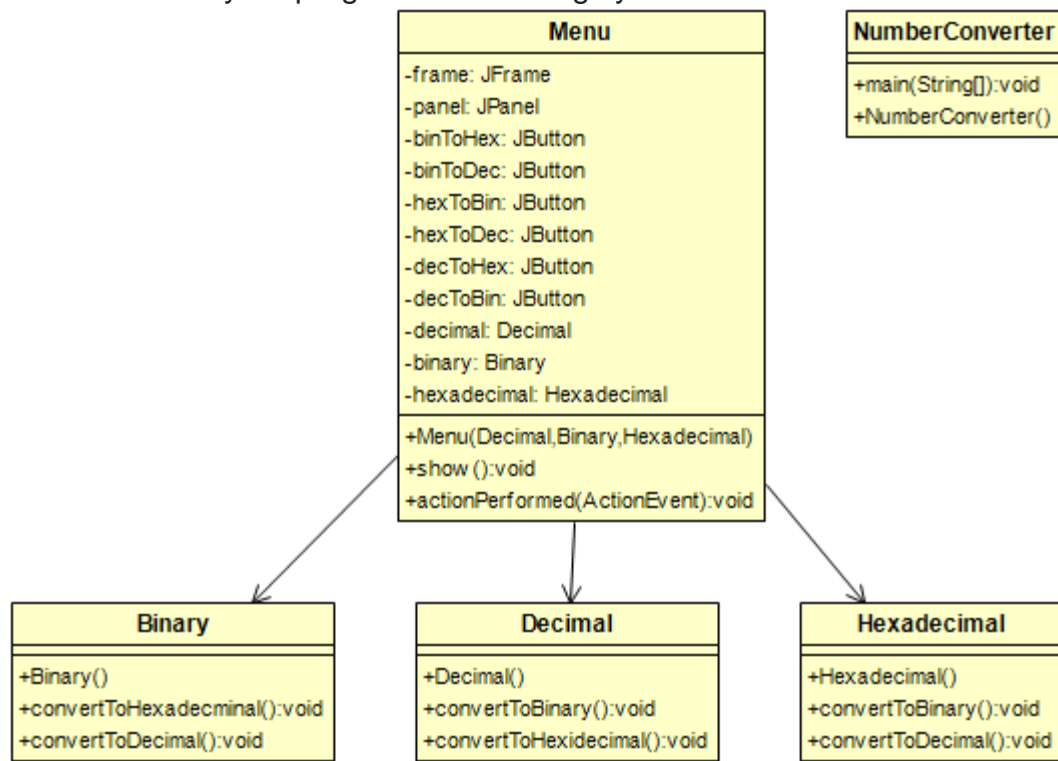


Each button should prompt the user for input and then provide the user with the correct conversion.

- Use `JOptionPane.showInputDialog()` to get input from the user. (note: this method returns a string)
- The user will be able to convert between decimal (Integers), binary, and hexadecimal number systems.
- Hexadecimal and binary numbers will be represented as Strings.
- The number system conversion methods must be implemented by you; e.g. you cannot use shortcuts such as: `Integer.parseInt(binaryStr, 2)` or `Integer.toString(decimal, 16)`. However, you can use `Integer.parseInt()` to convert from String to Integer.
- All input numbers, decimal, hexadecimal, and binary will not exceed the size of an `int`. (i.e. When taking in binary numbers as strings you can assume that the max string size will be 32.)
- You must make a class for each number system with methods in each class to convert to each number system. (e.g. There could be a class called **Binary** that is responsible for converting binary numbers to decimals and hexadecimal)
- Use Action Listeners to call the appropriate method when the button is clicked:

```
if(e.getSource()==binToHex){  
    binary.convertToHexadecimal();  
}
```

The class structure of your program should roughly look like this:



Each one of these boxes represent a class. There are 5 classes, one for each number system, one for your Menu, and finally one class that simply has a main method to run the program. Please feel free to add additional methods or improve upon the design.