task -1: successfully compiled 3 programs (Welcome.java, WelcomeWithThreeMessages.java, ComputeExpression.java) using the "javac" and run the programs using "java" command. For example (compile):

-> javac Welcome.java

-> java Welcome

task -2: Opened the SquareRoot.java program into the NetBeans editor.

task -3:

      a) Get the error: error: reached end of file while parsing} ^

      b) Get another error: error: cannot find symbol System.out.println("Y= "+ Y); ^

          symbol: variable Y

          location: class SquareRoot

      c) output value: Y= 2.23606797749979

      d) x is input variable and y is output variable.

      e) x = 16, output value: Y= 4.0

      f) java.lang.Math is a package. We import the Math package to solve mathematical equation using Java. In terms of our case, we use the java.lang.Math package to calculate the square root in our program. "sqrt(argument)", which is a method of Math class and the Math class is stored under the java.lang package.

task -4:

      a) I did not find any error on this SquareRoot2.java program. It is compile & run perfectly without any error or warning.

      b) after adding the "final" keyword I got an error: error: cannot assign a value to final variable x

    x=Math.sqrt(x);

      c)The situation is occured due to the "final" keyword. In java, whenever we will place the "final" keyword before any variable; the value of that particular variable can not be changed in runtime as well as compile time. That is why the program get an error.

task -5: Successfully modified the ComputeArea.java program; pre-defined input to console input;

Test-2 Program has been implemented successfully!

task -6:

a) double monthlyPayment = (loanAmount * monthlyInterestRate) / (1 - Math.pow((1 + monthlyInterestRate), -(numberOfYears * 12)));

b) Math.pow(x, y) is used to calculate the "power" of mathematical equation in java, where x is the base component and y is the exponent. the pow() method returned the calculated value as double.

c) In our expression, we are using a double value, which gives us a result with decimals. We use (int) to remove the decimal part and turn it into a whole number. This is because, in real life, we often use round numbers instead of fractions. However, this method just cuts off the decimal without rounding.