**This word doc is dedicated to the understanding and mastery of Java programming.**

**And using Data Structures and algorithms.**

**Put in the work.**

**Chapter 01 – Introduction to computers, Programs and The Java programming language.**

* Computers do not understand normal human languages.

* A low level programming language can be referred to as an Assembly language.
* This low level assembly language than passes the code written to an assembler which then translates to machine language, also called binary.

**Understanding Java and the world wide web:**

* Many commercial uses need java.
* A lot of sites on the web who incorporate backend technology uses java.

* The java language specification provides the language and it’s semantics, for developing these programs.
* The API, also known as the library contains predefined java classes, and interfaces for developing Java applications.
* Java SE, Jave EE, Java ME
* Client side, server side, mobile.

**Beginning to actually write in Java…**

* A Java program will always be executed from the Main method’s class.

* The most common errors occur with Syntax errors.

**End of basic concepts of programming, follow source code written within Netbeans Project.**

**Directory named: “Data Struc Book” all source code created there.**

**Chapter\_02 : Elementary Programming:**

* Writing a program involves designing an algorithm. And then translating that algorithm into a instructions, or code.

* In relation to Java… think of the **task… as your class name. And then the class must have a main method** in order for your task to be accomplished inside.
* Think of calculating the area of a circle…
* **The radius times radius times pi… is equaled to the area.**
* The program must prompt the user to enter the radius two times and then it must take those values and write them into a variable.
* Lines within the program show you stages of your code.
* Some values for example of your variables may have different values assigned to them, referring to this may be called as “**tracing the program**”
* Reading the input from the user requires the use of the **Scanner class. System.out is used for outputs, and System.in is used for inputs. (import java.util.scanner)**

**Example for working with the scanner class…**

**Follow the: ElementryProgramming/InputtingArea package for the source code…**

**Multiple practise files have been created within the NetBeans project: Elementary programming.**