**Objectives:**

Calculations Loops

If statements Rounding

**Design:**

* Create Hierarchy chart of the modules for this program.
* Create a Chapin Chart of the detailed logic.

**Program Name: BoatSales**

**Code:**

**Input:** **Default:**

Boat Type allow values of (‘B’, ‘P’, ‘S’, ‘C’) ‘S’

Accessory Type allow integer numbers of 1, 2, 3 1

Quantity allow 1-25 1

Boat Cost allow 2,500.00 – 150,000.00 25,000

Prep Cost allow 100.00 – 9999.99 5,000

\*\* Perform validation using the try/catch or switch clause. Display an appropriate error message for all errors. All invalid entries should be given the default listed.

**Boat Type: Markup %: Accessories: Accessory Cost:**

B = Bass 33% 1 = Electronics $5,415.30

P = Pontoon 25% 2 = Ski Package $3,980.00

S = Ski 42.5% 3 = Fishing Package $345.45

C = Canoe 20%

**Calculations:**

Markup amount = Appropriate markup percentage \* Boat cost

Subtotal = Boat Cost + Accessory Cost + Prep Cost + Markup amount \* Quantity

Tax = Subtotal \* 6%

Total Sales = Subtotal + Tax

\*\* Round the markup amount and tax to the nearest penny

**Output:** Display the following fields and labels: Boat literal, Accessory literal, quantity, boat cost, accessory cost, prep cost, markup amount, subtotal, tax and total sales.

Upon termination of the program display the number of sales and the grand total sales.

**Loop:** Ask the user if they want to calculate another receipt. If they enter a Y or y repeat the process, otherwise the program prints the grand totals and exits.

**Submit:**

Zip your java project, hierarchy and chapin together and submit to the drop box.

Push your project to your Github account.