**Pseudo Code Lab**

A vending machine has five slots for dispensing changes:

Output1: dollar coins

Output2: quarter coins

Output3: dime coins

Output4: nickel coins

Output5: penny coins

It has two slots for depositing money:

Input1: $1 and $5 bills. No other bills will be accepted.

Input2: Coins (dollar, quarter, dime, nickel, and penny coins only).

It has one user input device (Input3). The following values will be sent from this input device:

1. When the Cancel button is pressed, 0 will be sent from Input3.
2. When any one of the 15 item keys is pressed, the corresponding value (from 1 to 15) will be sent from Input3.

It has an array, Items(15, 2), that stores the prices and inventory counts for all items inside the machine. The first column in this array stores the price for each item and the second column in this array stores the inventory counts for each item. Once an item is dispensed, the value in the corresponding item’s inventory counts will be decremented by 1.

Develop logic in Defining Diagram and Pseudo Code that will do the following vending activities:

1. The transaction starts when money is received from either Input1 or Input2.
2. Any time during the transaction, if the customer presses the Cancel button, dispense the deposit amount from Output1, Output2, Output3, Output4, or Output5 (or combination of all) and then ends the transaction.
3. The total dollar amount received from both Input1 and Input2 should be less or equal to $5.
4. If the total dollar amount is more than $5, display “Deposit Amount Over Limit” message. The customer can only press the Cancel button from this point.
5. Accept item selection from the customer.
6. If the selected item is out of stock, display “Item Out. Please select another item”. From this point, the customer can only do the following:

(a) Press Cancel button to end the transaction.

(b) Select another item.

1. If the total dollar amount received is less than the price of the selected item, display “Please Deposit Addition Money” message. The customer can only do the following from this point:
2. Press Cancel button to end the transaction.
3. Deposit additional money to continue the transaction.
4. Select another item.
5. If the total dollar amount received is equal to the price of the selected item, dispense the selected item. The transaction ends.
6. If the total dollar amount received is more than the price of the selected item, dispense the return changes (deposit amount – item price) from Output1, Output2, Output3, Output4, or Output5 (or combination of all) to the user. The transaction ends.