Problem Set – More on Functions

* Prompt the user to repeatedly to do the program( input (Yes or No)). If they respond Yes, go into the loop and prompt them for last name, month and sales. Write a function to compute next month’s forecast. Pass to the function month and sales. Determine the forecast percent (see below) and compute next month’s sales to be sales x (1+forecast percent). Return next month’s sales and display the value.

Month Forecast Percent

Jan, Feb, Mar 0.10

Apr, May, Jun 0.15

Jul, Aug, Sep 0.20

Oct, Nov, Dec 0.25

Input Process Output

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User's response If Yes, then: Next month's

(Yes or No) 1. Prompt for last name forecasted sales

2. Prompt for current month value for the user.

3. Prompt for current sales

4. Calculate forecast percentage

5. Calculate next month's sales

* Prompt the user to repeatedly to do the program( input (Yes or No)). If they response Yes go into the loop and prompt the user for length, width and height of a room. Write a function to compute the square footage of the room. The function should receive the length, width and height of the room and return square footage (2 x length x width (floor and ceiling) + 2 x length x height (2 of the walls) + 2 x width x height (the other 2 walls). A gallon of paint covers 50 square feet. Compute the number of gallons needed to paint the room (square footage of the room / 50). Display the number of gallons needed.

Input Process Output

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User's response If Yes, then: Number of gallons

(Yes or No) 1. Prompt for length of the room needed to paint

2. Prompt for width of the room the room.

3. Prompt for height of the room

4. Calculate square footage of the room

5. Calculate the number of gallons needed

CODE DONE

* Prompt the user to repeatedly to do the program (input (Yes or No)). If they response Yes go into the loop and prompt the user for make, model, electric vehicle code (Y or N) and MSRP (sticker price) of an automobile. Write a function to compute the out the door price. Pass to the function the MSRP, make, model and electric vehicle code. Determine the percent off the MSRP then compute the new MSRP and finally add 7% sales tax to the total. Return and display the total. Also sum all MSRP’s and sum of all sales price of the cars (MSRP – discount + tax).

To determine percent off MSRP Percent off MSRP

Honda Accord 0.10

Toyota Rav4 0.15

All electric vehicles 0.30

All other vehicles 0.05

Input Process Output

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User's response If Yes, then: Total out-the-door

(Yes or No) 1. Prompt for the make of the car price for the current

2. Prompt for the model of the car car.

3. Prompt for the electric vehicle code Sum of all MSRP values.

4. Prompt for the MSRP of the car Sum of all sales prices

5. Determine percent off the MSRP of the cars (MSRP - discount + tax).

6. Calculate the new MSRP

7. Add 7% sales tax to the new MSRP

* Prompt the user to repeatedly to do the program( input (Yes or No)). If they response Yes go into the loop and prompt the user for last name and miles from downtown Chicago. Write a function to compute the train ticket price. Pass to the function the miles from down town Chicago and determine the ticket price. Return the ticket price. Sum price of all tickets.

Miles from Down Town Chicago Ticket Price

30 or more $12

20 to 29 $10

10 to 19 $8

All others $5

Input Process Output

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User's response If Yes, then: Ticket price for

(Yes or No) 1. Prompt for last name the current user.

2. Prompt for miles from downtown Chicago Sum of the prices of

3. Determine ticket price based on table all tickets.

4. Calculate ticket price

5. Sum the price of all tickets

CODE DONE

* Prompt the user to repeatedly to do the program( input (Yes or No)). If they response Yes go into the loop and prompt the user for county and market value of a home. Write a function to compute the assessed value. Pass to the function the county and market value. The function will determine the assessed value percent then compute and return the assessed value. (Multiple the market value by assessed value percent. Sum and display all market values and assessed values.

County Assessed Value Percent

Cook 0.90

DuPage 0.80

McHenry 0.75

Kane 0.60

All others 0.70

Input Process Output

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User's response If Yes, then: Market value and

(Yes or No) 1. Prompt for the county assessed value for

2. Prompt for the market value of the home the current home.

3. Determine assessed value percent Sum of all market values

4. Calculate assessed value and sum of all assessed values.

5. Sum and display all market values

and assessed values