

CA5213 – Full Stack Laboratory

Lab worksheet #5 - ReactJS

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(Due: Tuesday, May 23, 2023)

(10 Points)

The objective of this assignment is to give you some hands-on experience with the ReactJS.

Programming Exercises

1. Shan energies PVT Ltd wants to create an application using ReactJS to calculate the amount for the consumed energy by the customer. The interface must take the energy consumed in units and the default subsidy amount is 250. Below you can find the different slabs.

Consumption Unit	Rate of charge
0 - 100	Rs 0 per Unit
101-200	Rs 100 plus Rs 3.75 per Unit exceeding 150 units
201-400	Rs 250 plus Rs 4 per unit exceeding 350 units
401-600	Rs 300 plus Rs 4.25 per unit exceeding 450 units
Above 600	Rs 400 plus Rs 5 per unit exceeding 600 units

The final calculation must be displayed as shown below.

Consumed Units:	580.0
Total Current Charges Rs.	2508.0
Current Charges Rs.	2508.0
Fixed Cost Rs.(+)	50.0
Subsidy Fixed Cost Rs.(-)	0.0
New Subsidy Rs.(-)	250.0
Net Amount Rs.	2308.0

2. Recently you got a job in Chennai, and you moved to the Anna Nagar Area and decided that you want to start saving to buy a house. As housing prices are extremely high in that area, you realize you are going to have to save for several years before you can afford to make the down payment on a house. Develop a SPA using ReactJS to calculate how many months it will take you to save up enough money for a down payment. Assume the down payment is 0.25 (25%). Your program should ask the user to enter the following variables:
 - a. The starting annual salary (annual_salary)
 - b. The portion of salary to be saved (portion_saved). Assume you are going to dedicate a certain amount of your salary each month to saving

for the down payment. This variable should be in decimal form (i.e. 0.1 for 10%).

- c. The cost of your dream home (total_cost).
3. A simple storefront ReactApp for the Salem Café, which sells Blueberry Muffins and Chocolate Chip Cookies. The web interface shows the name of each item and how many are available and has a **Buy** button for each item that the user can click to buy one item. The store interface also shows the total number of items sold so far (cookies plus muffins). When this React app is loaded into a browser, what is the HTML code that is generated by the React program and sent to the browser? You should show the HTML as it would appear initially before any buttons have been clicked to buy any muffins or cookies. Give the HTML that would be generated by the React program.
4. Create ReactApp **GoTaxi** to book a taxi by specifying the starting point, destination. The starting point and destination should have the autocomplete feature. The user should be able to select the time of pickup and type of car for the travel as shown in the interface below. The charges for Hatchback car Rs15/km, Sedan cars Rs20/km and SUV cars Rs30/km. The no. of kilometres between the points are to be assumed. When the book button is pressed Booking slip should be generated by the react program in the form of HTML.

GoTaxi

Starting point:

Destination:

Date and Time:

June 06, 2023 03:00pm

Type of Car

Select ▼

Book