Web Development – Mr. Turner

Level 6 Project – Disjunction Wireless

Project Overview

Disjunction Wireless, the 144th highest rated cell phone provider in the town of Small Town, has hired your to create an analysis page. They have been using the same plans for years and years and years and have come to the conclusion that some of their pricing doesn't meet customer needs. Your job is to create a page which reads in the data for the customers and analyzes which plans are best for which people.

Display

The list below includes the essential elements of the page.

- Your page will need a comprehensive table of data including the following:
    - Customer's 10 digit phone number
    - The customer's data usage, in megabytes
    - The customer's data plan
    - The monthly bill for each of the 3 data plans available
- An analysis of the data showing:
    - The number of customers using each plan
    - Which is the best plan for the company
        - The plan that is being used the most and is still the best plan for the customer.
    - Which plan is the worst for the company
        - The plan that is being used the most and is the most expensive for the customer.
    - The percentage of customers who are not using the best plan (cheapest for them)
    - The percentage of customers who are using the best plan (cheapest for them)
    - The average overpayment

The analysis should appear above the comprehensive table so that management can view the results without having to scroll through all of the customers.

Functionality

You will need a dataset of between 1000 and 10000 customers. You should write a utility that generates this dataset randomly and stores it in an array of objects. Each customer has the following information associated with it:

- The Customer's 10 digit phone number
    - The phone number can have any digits from 0 - 9, but may not begin with a 0.

- ○ All phone numbers must be unique.
- The Customer's data usage for the month, in megabytes (between 1 and 40000)
- The Customer's plan

There are 3 phone plans:

- **Basic** - $19.99 base price. Customers receive 1GB (1000 megabytes) of data and are charged 10 cents for each MB they use over the 1000.
- **Comprehensive** - $24.99 base price. Customers receive 4GB of data (4000 megabytes) and are charged 25 cents for each MB they use over the 4000.
- **Sucker** - $4.99 base price. Customers pay 2 cents per megabyte.

As the page loads, it will read the data from the data file and build the 2 tables.

Enhancements

- The Unlimited Plan
  - ○ Disjunctive Wireless is experimenting with an unlimited plan. This plan would have a base price of $49.99 and the customer would not be charged for usage.
  - ○ For what percentage of customers would this plan work best as a replacement for their current plan?
- Annualized Data
  - ○ Generate 12 datasets (one for each month) using the same customer base with the same plans (only the number of megabytes used changes.
  - ○ Conduct the same analyses, but over the course of the year.
  - ○ Does the Unlimited Plan work better?