We Sell All Car Company – Finance Program

You are working as a business analysis for We Sell All Cars Company, who sell both new and used car as well as offer full automobile servicing to wide range of cliental in greater Philadelphia Area. The WSAC Company offers a range of loan options in their prospective buyers based on a range of factors which include credit history, previous purchases and prior maintenance history.

During your meeting with Jane Smith, the Director of Finance for We Sell All Cars Company, you captured notes on the criteria for the determining the loan rate and term that will be offered to a client.

**Key Criteria:**

- **Clients with a prior purchase, no missed payments on prior car loan:**
  Credit score greater than 750 will be offered a 6 year car loan with a rate 25 basis points below the prime rate, clients with a credit score between 750 and 500 will be offered a 5 year car loan with a rate 0 basis points below the prime rate, otherwise they will be offered a 5 year car loan with a rate at 25 points above the prime rate, based on the day of purchase.

- **Clients with a prior purchase, in poor standing due to missed loan payments:**
  Credit score greater than 650 will be offered a 4 year car loan with a rate 25 basis points above the prime rate at the time of purchase, otherwise the applicant will be offered a 4 year car loan with a rate 75 basis points above the prime rate at the time of purchase.

- **Clients with no prior purchase from WSAC:**
  Spent more than 2,500 in maintenance work and credit score greater than 550 will be offered a 4 year car loan with a rate 25 basis points above the prime rate at the time of purchase, clients that have spent more than 1,000 in maintenance work with a credit score between 550 and 300 will be offered a 3 year car loan with a rate 50 basis points above the prime rate at the time of purchase.

- **Clients with no prior purchase from WSAC, and have never had maintenance work with a credit score greater than 550 will be offered a 3 year car loan with a rate 100 basis points above the prime rate at the time of purchase.

- **All other Clients** will be sent a rejection letter and placed in the application archive system.

**The Deliverables:** Using the information provided:

1. Identify the set of business rules that We Sell All Cars Company is using to decide what interest rate and the term of the loan to offer the client.
2. Draw a Decision Tree of how We Sell All Cars Company should link these business rules to decide what rate and loan term to offer the client.
3. Write a list of questions (4-5) that you want to ask Jane Smith when you go back to her with your draft rules to check if they are correct.
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Business Rules

BR 1.0 Existing WSAC customer

BR 1.1 Existing WSAC customers having no missed payments with a Credit score greater than 750; will be offered a 6 year car loan with a rate 25 basis points below the prime rate based on day of purchase.

BR 1.2 Existing WSAC customers having no missed payments with a Credit score between 750 and 500; will be offered a 5 year car loan with a rate 0 basis points below the prime rate based on day of purchase.

BR 1.3 Existing WSAC customers having no missed payments with a Credit score below 500; will be offered a 5 year car loan with a rate 25 points above the prime rate based on day of purchase.

BR 1.4 Existing WSAC customers having missed payments with a Credit score greater than 650; will be offered a 4 year car loan with a rate 25 basis points above the prime rate based on day of purchase.

BR 1.5 Existing WSAC customers having missed payments with a Credit score below 650; will be offered a 4 year car loan with a rate 75 basis points above the prime rate based on day of purchase.

BR 2.0 Non-WSAC customer

BR 2.1 Non-WSAC customer having spent more than 2,500 dollars in maintenance with a Credit score greater than 550; will be offered a 4 year car loan with a rate 25 basis points above the prime rate at the time of purchase.

BR 2.2 Non-WSAC customer having spent more than 1,000 dollars in maintenance with a Credit score between 550 and 300; will be offered a 3 year car loan with a rate 0 basis points above the prime rate at the time of purchase.

BR 2.3 Non-WSAC customer having spent less than 1,000 dollars in maintenance; will be offered a 3 year car loan with a rate 50 basis points above the prime rate at the time of purchase.

BR 2.4 Non-WSAC customer having spent 0 dollars in maintenance with a Credit score greater than 550; will be offered a 3 year car loan with a rate 100 basis points above the prime rate at the time of purchase.

BR 3.0 Rejected applicant

BR 3.1 Customers not meeting specific criteria will be sent a rejection letter and placed in the application archive system.
**Decision Tree**

**Existing WSAC Customer**

- **Missed Payments**
  - Yes: **Credit Score Above 750**
    - Yes: 6 year car loan with a rate 25 basis points below the prime rate based on day of purchase (BR 1.1)
    - NO: **Credit Score Between 750 and 500**
      - YES: 5 year car loan with a rate 0 basis points below the prime rate based on day of purchase (BR 1.2)
      - NO: **Credit Score Above 650**
        - YES: 4 year car loan with a rate 25 basis points above the prime rate based on day of purchase (BR 1.3)
        - NO: **Maintenance Expenses**
          - YES: Expenses over 2,500 with Credit Score Above 550
            - YES: 4 year car loan with a rate 25 basis points above the prime rate at the time of purchase (BR 2.1)
            - NO: **Expenses Over 1,000 with Credit Score Between 550 and 300**
              - YES: 3 year car loan with a rate 0 basis points above the prime rate at the time of purchase (BR 2.2)
              - NO: **Credit Score Above 550**
                - YES: 3 year car loan with a rate 50 basis points above the prime rate at the time of purchase (BR 2.3)
                - NO: **Credit Score Above 550**
                  - YES: 3 year car loan with a rate 100 basis points above the prime rate at the time of purchase (BR 2.4)
                  - NO: **Send Rejection and archive (BR 3.1)**
          - NO: Expenses over 1,000 with Credit Score Between 550 and 300
            - YES: 3 year car loan with a rate 0 basis points above the prime rate at the time of purchase (BR 2.5)
            - NO: **Credit Score Above 550**
              - YES: 3 year car loan with a rate 50 basis points above the prime rate at the time of purchase (BR 2.6)
              - NO: **Credit Score Above 550**
                - YES: 3 year car loan with a rate 100 basis points above the prime rate at the time of purchase (BR 2.7)
                - NO: **Send Rejection and archive (BR 3.1)**

- NO: **Credit Score Below 750**
  - YES: 5 year car loan with a rate 0 basis points below the prime rate based on day of purchase (BR 1.2)
  - NO: **Credit Score Below 500**
    - YES: 4 year car loan with a rate 7.5 basis points above the prime rate at the time of purchase
    - NO: **Send Rejection and archive (BR 3.1)**
Follow Up Questions:

1. To be an existing WSAC customer you had to buy a car?
2. How far back should we look for missed payments?
3. What is the definition of Maintenance?
4. What event constitute the Date of Purchase?
5. What Credit Score organization should be used (lowest, average or highest)?
6. How do you determine the Prime Rate?