**1. Loan Eligibility Decision Table**

**Scenario**: A bank provides loans based on the applicant’s age, credit score, and income. The decision criteria are as follows:

* Age:
  + If age is between **25** and **50** years, the applicant is eligible for a loan.
  + Otherwise, the applicant is **not eligible**.
* Credit Score:
  + If the credit score is above **650**, the applicant is eligible for a loan.
  + Otherwise, the applicant is **not eligible**.
* Income:
  + If the income is greater than **$40,000**, the applicant is eligible for a loan.
  + Otherwise, the applicant is **not eligible**.

**Question**:

* Create a Decision Table for this loan eligibility scenario. Include all possible combinations of conditions (age, credit score, income) and actions (loan eligibility).

**2. Discount Eligibility Decision Table**

**Scenario**: A retail store offers discounts based on the customer’s membership status, purchase amount, and the day of the week:

* If the customer is a **Premium Member**, they get a **10% discount**.
* If the customer is a **Regular Member**, and the purchase is above **$100**, they get a **5% discount**.
* On **Sundays**, all customers receive a **10% discount** regardless of membership status or purchase amount.
* No discount is applied if the purchase is **less than $50** (for both membership types).

**Question**:

* Create a Decision Table for the discount eligibility based on membership, purchase amount, and day of the week. List all possible combinations and their corresponding actions (discount or no discount).

**3. Employee Bonus Decision Table**

**Scenario**: An employee bonus system is based on the following criteria:

* **Performance**: The employee's performance is rated on a scale of **1-5**, where **1-2** is poor, **3** is average, and **4-5** is good.
* **Tenure**: The employee has been with the company for either **less than 3 years** or **3 years and more**.
* **Sales Target**: The employee's sales target has either been **met** or **not met**.

The bonus is awarded based on the following conditions:

* Employees with **good performance** (rating **4 or 5**) and **met sales target** get a **bonus**.
* Employees with **poor performance** (rating **1 or 2**) or those who **did not meet the sales target** **do not get a bonus**.
* Employees with **average performance** (rating **3**) and **3+ years tenure** **always get a bonus**, regardless of sales target.

**Question**:

* Create a Decision Table for employee bonus eligibility based on performance, tenure, and sales target.

**4. Shipping Fee Calculation Decision Table**

**Scenario**: A company calculates shipping fees based on the following conditions:

* **Order Amount**: If the order amount is **over $100**, the shipping is **free**. If the order amount is **$100 or less**, a fee applies.
* **Location**: If the order is being shipped to **international locations**, the fee is higher than for **domestic** locations.
* **Express Shipping**: If the customer selects **express shipping**, the fee is higher than for **standard shipping**.

The shipping fee calculation rules are as follows:

* If the order amount is **over $100** and the shipping is **domestic**, the shipping is **free**.
* If the order amount is **$100 or less** and the shipping is **domestic**, the fee is **$10**.
* For **international orders**, the shipping fee is **$25**, regardless of the order amount.
* If **express shipping** is selected, an additional **$15** is added to the shipping fee.

**Question**:

* Create a Decision Table that calculates the shipping fee based on the order amount, shipping location, and shipping method.

**5. Student Grade Decision Table**

**Scenario**: A university system assigns a final grade based on the following conditions:

* **Attendance**: The student must have attended **at least 75%** of the classes to pass.
* **Assignments**: The student must have scored **at least 60%** on assignments.
* **Final Exam**: The student must score **at least 50%** on the final exam.

Based on these conditions, the student’s grade is assigned as follows:

* If the student meets all three conditions, they receive a grade of **"Pass"**.
* If they fail to meet one condition, the grade is **"Fail"**.
* If they meet all conditions and have an attendance rate above **90%**, they receive a grade of **"Distinction"**.

**Question**:

* Create a Decision Table to determine the student's grade based on their attendance, assignments, and final exam scores.

**6. Online Membership Eligibility Decision Table**

**Scenario**: A website grants online memberships based on the following criteria:

* **Age**: If the user is **under 18**, they are **not eligible** for membership.
* **Country**: Users from certain **restricted countries** (e.g., country A and country B) are **not eligible** for membership.
* **Subscription Type**: The user can choose between **Basic** and **Premium** subscriptions.

The membership eligibility rules are:

* Users who are **over 18**, **not from restricted countries**, and have selected a **Premium** subscription are eligible for membership.
* **Basic** subscription users are **eligible** for membership, regardless of age or country.
* Users who are **under 18** or from a **restricted country** are not eligible, regardless of subscription type.

**Question**:

* Create a Decision Table for the online membership eligibility based on age, country, and subscription type.

**7. Ticket Pricing Decision Table**

**Scenario**: A cinema offers different ticket prices based on the following conditions:

* **Day of the Week**: On **weekdays**, the ticket price is lower than on **weekends**.
* **Time of Day**: Tickets purchased for **matinee shows** (before 6 PM) are cheaper than for **evening shows** (after 6 PM).
* **Age Group**: Tickets are cheaper for **students** and **seniors**.

The ticket pricing rules are:

* **Weekday matinee shows**: Full price for regular customers, discounted price for students and seniors.
* **Weekday evening shows**: Full price for all customers.
* **Weekend matinee shows**: Discounted price for students and seniors, full price for regular customers.
* **Weekend evening shows**: Full price for all customers.

**Question**:

* Create a Decision Table to determine the ticket price based on day of the week, time of day, and customer type (student, senior, or regular).

**8. Car Rental Eligibility Decision Table**

**Scenario**: A car rental company has the following eligibility conditions:

* **Age**: The customer must be at least **21 years old**.
* **Driving Experience**: The customer must have been driving for at least **2 years**.
* **License**: The customer must hold a **valid driver’s license**.

The rental rules are:

* If the customer is **21 or older**, has **2 or more years of driving experience**, and holds a **valid license**, they are eligible to rent a car.
* If the customer meets any two of these conditions, they are **not eligible**.
* If they fail to meet any of the conditions, they are also **not eligible**.

**Question**:

* Create a Decision Table for the car rental eligibility based on age, driving experience, and license status.