**Rewards Service Documentation**

**Overview**

The RewardsServiceImpl class is a service implementation that handles the business logic related to customer transactions and reward points. It interacts with the RewardsRepository to fetch, update, and manage transaction data and calculate rewards.

**Methods**

**1. getAllTransaction**

* **Description:** Retrieves all transactions from the repository.
* **Return Type:** List<Transaction>
* **Response:** A list of all transactions.

**2. getTransactionByCustId**

* **Description:** Retrieves transactions for a specific customer.
* **Parameters:**
  + custId (String): The ID of the customer.
* **Return Type:** List<Transaction>
* **Response:** A list of transactions for the specified customer.
* **Exceptions:**
  + Throws CustomerIdNotFoundException if no transactions are found for the given customer ID.

**3. getTransactionByCustIdAndMonth**

* **Description:** Retrieves transactions for a specific customer and month.
* **Parameters:**
  + custId (String): The ID of the customer.
  + month (String): The month of the transactions.
* **Return Type:** List<Transaction>
* **Response:** A list of transactions for the specified customer and month.
* **Exceptions:**
  + Throws TransactionNotFoundException if no transactions are found for the given customer ID and month.

**4. updateRewardPoints**

* **Description:** Calculates and updates reward points for all transactions.
* **Return Type:** List<Transaction>
* **Response:** A list of transactions with updated reward points.

**5. calculateRewardPoint**

* **Description:** Calculates reward points for a given transaction based on the amount spent.
* **Parameters:**
  + trn (Transaction): The transaction object.
* **Return Type:** int
* **Response:** The calculated reward points for the transaction.

**6. getTotalReward (By Customer ID)**

* **Description:** Retrieves the total rewards for a specific customer.
* **Parameters:**
  + custId (String): The ID of the customer.
* **Return Type:** Reward
* **Response:** The total rewards for the specified customer.
* **Exceptions:**
  + Throws CustomerIdNotFoundException if no transactions are found for the given customer ID.

**7. getTotalReward (All Customers)**

* **Description:** Retrieves the total rewards for all customers across all months.
* **Return Type:** List<Reward>
* **Response:** A list of total rewards for each customer.

**Exceptions**

**CustomerIdNotFoundException**

* **Description:** Thrown when no transactions are found for a given customer ID.
* **Parameters:**
  + message (String): The error message.
  + details (String): Additional error details.

**TransactionNotFoundException**

* **Description:** Thrown when no transactions are found for a given customer ID and month.
* **Parameters:**
  + message (String): The error message.
  + details (String): Additional error details.

**Dependencies**

* **RewardsRepository:** Used to interact with the database and fetch transaction data.
* **Reward:** Model representing the reward details.
* **Transaction:** Model representing the transaction details.