**Product and Pricing Module – Term Deposit**

A product is a combination of different elements that the bank offers to its customers in the form of an account. The Product and Pricing module enables a bank to define and maintain the products & services offered to customers. It allows for building flexible products targeted at different customer segments. Business rules that govern the processing behavior of a product are defined in this module.

Accounts are always based on products and inherit the processing behavior and controls defined at the product level

A Product can have different constructs, and some of them are as follows:

* **Basic Details:** Basic details of a product definition comprise the details that are common across any product. Basic details constitute generic information of the product, such as
  + Product Name: Any user-defined name e.g. Short-Term FD
  + Product Code: User-defined code for product FD001
  + Product Type: Example Savings, Fixed Deposits, Loans, etc.
  + Effective Date 🡪 Date from which the product comes into effect
  + Bank-Branch 🡪 Bank/Branch to which the product belongs
  + Currency 🡪 Currency in which the product is offered. Use the ISO currency code
  + Audit details 🡪 All that are taught in FinTech Lab
* **Role Types:** Roles define the relationship various parties might have to the account, and/or to the related accounts that comprise it. Define the role types that are valid for a given product.
  + Owner
  + Co-Owner
  + Guardian
  + Nominee
  + Borrower
  + Guarantor
* **Business Rules:** Business rules define the nature and behavior of the product.
  + Some business rules can hold a single value, whereas some can be matrixed
  + Some values can be set on the product, and the same can be defaulted on the account
  + Some values can only be set on account
  + Some are set for validation or checks at the account 🡪 Min-Max Term, Min-Max Amount, etc.

Simple Business Rules: The rules that consist of a single value can be categorized as simple rules. These can hold a number, a text or a String, a date, a percentage value, Flag, etc.

|  |  |  |
| --- | --- | --- |
| Type | Value | Business Values |
| Date | 12-05-2025 | Date of Birth, Maturity Date etc. |
| Number | 20 | Number of transactions allowed in a day, Number of owners allowed |
| Text | Any predefined Text | Rounding Option 🡪 RoundUp, RoundDown, etc.  Account Type 🡪  FD Account, Loan Account, etc. |
| Percentage | 5% | The percentage of the amount that can be withdrawn from the FD. |
| Currency | INR , USD | Store the ISO value. E.g., Account currency is INR |

Complex rules are business rules that need more than one value or have more than one part and are interconnected to form a meaningful rule.

|  |  |  |
| --- | --- | --- |
| Type | Value | Business Values |
| Duration | Years, months, days, or a combination of all 3 | FD term of 3 years 3 Months |
| Frequency | 5th of every month, End of every month, 1st of every quarter, etc. | Interest accrual – End if every month.  Statement 🡪 Sent on account anniversary date |
| Combination of simple values:  Text and Number |  |  |
| Amount with Currency | Currency: INR  Amount: 10,000 | Note: The amount format has to be Decimal (26,4) |

* **Charges:** The charges are the components with which the bank provides or takes money from the customer. The frequency of calculation for each of the defined charges
  + Interest 🡪 Debit for Loan, Credit for Deposits
  + Rate Matrix
  + Fees 🡪 Early withdrawal fees for TD
  + Tax 🡪 Tax withholding for interest earned on TD
* **Customer Communications:** Itencompasses the interactions and information exchange between a bank and its customers across various channels like email, phone, post, etc.
  + Alerts 🡪 When some event happens like Account opening, Transactions, Account Closure, etc.
  + Notices 🡪 FD Receipt (on account opening), FD Maturity Notice, Loan Payment due Notice
  + Statements 🡪 List of transactions on the account in a particular period. It could be recurring or ad hoc (online one time).
* **Transaction Types:** Define transaction types that are allowed on the product. Not all products allow all transaction types. Deposit accounts allow Deposit and Withdrawal transactions, whereas they do not allow disbursement or payment transactions.
  + Deposit
  + Withdrawal
  + Interest accrued
  + Disbursement
  + Payment, etc.
* **Balances:** Define balances supported for each of the product types
  + Loan Principal
  + Loan Interest
  + FD Principal
  + FD Interest, etc.

**The students, as part of this exercise, have to build the Product and Pricing module.**

* + A data structure to cater to Product and Pricing details. Get the ER reviewed and approved. ER is one of the deliverables.
  + API’s for
    - Creating the product - PUT
    - Maintaining the product - POST
    - Get the list of products based on search criteria like product code, product type, date range, etc.
    - Inquire product – Details the individual product and its respective details - GET
  + UI for the API’s
  + Reports 🡪 Generate reports for the bank
    - Products created for the day, for the month, between a date range, by a given user, etc.
    - All products that are active on a given date based on the product type.
    - Interest Rate for the products