**Problem Description :**

* A relatively young bank is growing rapidly in terms of overall customer acquisition. Majority of these are Liability customers with varying sizes of relationship with the bank. The customer base of Asset customers is quite small, and the bank wants to grow this base rapidly to bring in more loan business.
* Specifically, it want to explore ways of converting its liability customers to Personal Loan customers.
* A campaign the bank ran for liability customers last year showed a healthy conversion rate of over 9% success. This has encouraged the Retail Marketing department to devise smarter campaigns with better target marketing.

**Anlaytics Objectives :**

* 1) While designing a new campaign, can we model the previous campaign's customer behavior to analyze what combination of parameters make a customer more likely to accept a personal loan?
* 2) There are several special products / facilities the bank offers like CD and security accounts, online services, credit cards, etc. Can we spot any association among these for finding cross-selling opportunities?

**Data Set Description :**

* ID: Customer ID
* Age: Customer's age in completed years
* Experience: # of years of professional experience
* Income: Annual income of the customer in thousands of Dollars
* ZIPCode: Home Address ZIP code. Do not use ZIP code
* Family: Family size of the customer
* CCAvg: Avg. spending on credit cards per month in thousands of Dollars
* Education: Education Level. 1: Undergrad; 2: Graduate; 3: Advanced/Professional
* Mortgage: Value of house mortgage if any. (thousands of Dollars)
* **PersonalLoan: Did this customer accept the personal loan offered in the last campaign?**
* SecuritiesAccount: Does the customer have a securities account with the bank?
* CDAccount: Does the customer have a certificate of deposit (CD) account with the bank?
* Online: Does the customer use internet banking facilities?
* CreditCard: Does the customer use a credit card issued by UniversalBank?

**Note:**

* While reading the data set replace the '?',',' as NAs