
System : Online Loan Management System
Company/Office : AB Finance Corporation

Project Stage : Conceptual Data Model

Date : November 11, 2020

Subject : CS 213 – Database Management System
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Entity Types Documentation

Entity Type	Description	Aliases	Occurrence
Loan Processor	The person that processes and verifies the loan documentation before submitting to the underwriter	loan processor	Each loan processor verifies one or more loan documentation
Customer	The person who applies a loan	customer borrower applicant	Each customer can submit one loan application at a time Each customer is asked for one or more loan documentation
Disbursement	The paying out of loan proceeds	disbursement payout payment	Each disbursement is authorized by one underwriting result One or many disbursement is handled by one manager
Loan Application	The document that is used by customers to apply for a loan	loan application	One or many loan application is evaluated by one loan officer One loan application is submitted by one customer One loan application depends on one underwriting result
Loan Documentation	The credit-related documents that verifies the identity of the customer and evaluates their creditworthiness Includes credit report, financial statement and bank statement.	loan documentation credit-related document	One or many loan documentation is process by one loan processor One or many loan documentation is asked to one customer One or many loan documentation makes one underwriting result
Branch	Location where the staff worked	branch	Each branch has one or more staff

Loan Officer	<p>The person that evaluates the loan application and assist customers</p> <p>The person responsible if a customer will proceed in the submission of loan documentation</p>	loan officer consultant	Each loan officer evaluates one or more loan application
Manager	The person responsible for handling the disbursement of the approved loan application	manager	Each manager handles one or more disbursement
Staff	<p>The people who works in a company</p> <p>Includes manager, underwriter, loan processor and loan officer</p>	staff employee worker	One or more staff belongs to one branch
Underwriter	The person that underwrites loan documentation	underwriter	Each underwriter produces one underwriting result
Underwriting Result	The result of the underwritten loan documentation responsible for the approval of the loan application and authorization of the disbursement of funds	underwriting result	<p>Each underwriting result is produced by one underwriter</p> <p>Each underwriting result authorized one disbursement</p> <p>Each underwriting result depends by one loan application</p> <p>Each underwriting result is made by one or many loan documentation</p>

Relationship Documentation

Entity Type	Multiplicity	Relationship	Multiplicity	Entity type
Branch	1..1	has	1..*	Staff
Customer	1..1	Submits	1..1	Loan Application
Customer	1..1	askfor	0..*	Loan Documentation
Loan Application	1..1	depends	1..1	Underwriting Result
Loan Documentation	1..*	makes	1..1	Underwriting Result
Loan Officer	1..1	evaluates	1..*	Loan Application
Loan Processor	1..1	processes	1..*	Loan Documentation
Manager	1..1	handles	1..*	Disbursement
Underwriter	1..1	produces	1..*	Underwriting Result
Underwriting Result	1..1	authorizes	0..1	Disbursement

Attribute Documentation

Entity Type	Attributes	Description	Data Type and Length	Nulls	Classification
Branch	branchNo	Uniquely identifies a branch	4 char	No	Simple Composite
	address			No	
	street	Street of the branch	255 varchar		
	barangay	Barangay of the branch	255 varchar		
	city	City of the branch	255 varchar		
	province	Province of the branch	255 varchar		
	zipCode	Zip code of the branch	5 char		
	contactNo	Landline or mobile number	12 char	No	
	websiteAddress	Website of the branch	255 varchar	No	
	emailAddress	Email address of the branch	255 varchar	Yes	Multi-valued
Staff	staffNo	Uniquely identifies the staff	7 char	No	Simple Composite
	name			No	
	fName	First name of staff	255 varchar		
	mName	Middle name of staff	255 varchar		
	lName	Last name of staff	255 varchar		
	address	Address of staff	255 varchar	No	
	contactNo	Landline of mobile number	12 char	Yes	Composite Multi-valued
	DOB	Date of birth of staff	Date	No	
	sex	Sex of staff	1 char (M/F)	No	
	emailAddress	Email address of staff	255 varchar	Yes	Multi-valued
	position	Position of staff	255 varchar	No	
	monthlySalary	Monthly salary of staff	6 int	No	
	travelAllowance	Travel allowance of staff	4 int	Yes	Simple
Manager					
Underwriter					
Loan Processor					
Loan Officer					
Loan Documentation	name	Name in documentation	255 varchar	No	Composite Composite
	address	Address in documentation	255 varchar	No	

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Customer	customerNo	Uniquely identifies customer	10 char	No	Simple
	Customer Details				
	name	Name of customer	255 varchar	No	Composite
	address	Address of customer	255 varchar	No	Composite
	sex	Sex of customer	1 char (M/F)	No	Single-valued
	DOB	Date of birth of customer	Date	No	Composite
	nationality	Nationality of customer	255 varchar	No	Single-valued
	contactNo	Mobile number	12 char	No	Single-valued
	SSS/GSIS/UMID	Id number of customer	15 char	No	Single-valued
	TIN	TIN of customer	16 char	No	Single-valued
	emailAddress	Email address of customer	255 varchar	Yes	Multi-valued
	spouseName	Spouse name of customer	255 varchar	Yes	Composite
	typeOfResidence	Rented, owned, mortgaged or living with relatives or parents	255 varchar	No	Single-valued
	yearsInResidency	Years in residency of cust	2 tinyint	No	Simple
	Employment Details			No	
	employmentType	Employed, full or part owner	255 varchar		Single-valued
	employerName	Employer name if employed	255 varchar		Composite
	businessName	Name of business of the customer whether owned or employed	255 varchar		Simple
	natureOfBusiness	Nature of business	255 varchar		Simple
	businessAddress	Business address of customer	255 varchar		Composite
	officeContactNo	Office contact no of customer	12 char		Multi-valued
	LOS	Length of stay of customer	2 tinyint		Simple
	monthlySalary	Monthly salary of customer	6 int		Simple
	Credit Card Details			Yes	
	bank	Credit card issuer of customer	255 varchar		Simple
	creditCardType	Current, savings, payroll or credit card	255 varchar		Single-valued
	creditLimit	Credit card limit of customer	7 int		Simple
	cardNo	Credit card number of customer	20 char		Single-valued
	expiryDate	Expiry date of credit card	Date		Composite
	Other Loan Details			Yes	
	nameOfcompany	Name of company the loan borrowed	255 varchar		Simple
	typeOfLoan	Unsecured or secured loan	255 varchar		Single-valued
	collateralOffered	Collateral offered by customer if secured loan	255 varchar		Simple
	term	Term of the loan	3 smallint		Single-valued
	loanAmount	Amount of loan borrowed	6 int		Simple
	outstandingBal	Remaining balance of the loan	6 int		Simple
	monthlyPayment	Monthly payment of the loan	6 int		Simple

Loan Application	applicationNo	Uniquely identifies the application	10 char	No	Simple
	newCustomer	New cust of this company	1 char (Y/N)	No	Single-valued
	channel	Office or online application	255 varchar	No	Single-valued
	Loan Details			No	
	term	Term of the loan	3 smallint		Single-valued
	loanAmount	Amount of the loan	6 int		Simple
	date	Date submitted	Date		Composite
	purpose	Purpose of the loan	255 varchar		Single-valued
	bank	Preferred disbursement account if approve	255 varchar		Single-valued
Credit Report	reportNo	Uniquely identifies the credit report	10 char	No	Simple
	creditScore	Credit score of customer	3 smallint	No	Simple
Financial Statement	documentNo	Uniquely identifies the financial statement	10 char	No	Simple
Bank Statement	accountNo	Uniquely identifies the bank statement	10 char	No	Simple
Underwriting Result	resultNo	Uniquely identifies the underwriting result	5 char	No	Simple
	Summary				
	loanStatus	Approved, suspended or decline	255 varchar	No	Single-valued
	authDisbursement	Authorize the disbursement of funds depending on the status	1 char (Y/N)		Single-valued
	date	Date when the result issued	Date		Composite
	Requested			No	
	reqLoanAmt	Requested loan amount	6 int		Simple
	reqTerm	Requested term of the loan	3 smallint		Single-valued
	Result			No	
	termResult	Available term for the borrower	3 smallint		Simple
	paymentAmount	Monthly payment of loan	6 int		Simple
	flatInterestRate	Interest rate of the loan	5, 4 decimal		Simple
	maxFinancedAmt	Maximum amount available to borrow	6 int		Simple

Disbursement	Bank	Selected bank for disbursement	255 varchar	No	Simple
	providedAccNo / contactNo	Provided account number of disbursement or the contact number of customer	12 char	No	Simple
	date	Date of disbursement	Date	No	Composite
	disburseAmount	Amount disburses	6 int	No	Simple
	disburseChannel	Office or bank	255 varchar	No	Single-valued
	comment	Comment of the disbursement	255 varchar	Yes	Composite

Domains of Attribute

Attribute	Domain
accountNo applicationNo documentNo reportNo	0000000000 – 9999999999
address	An address in the Philippines
authDisbursement newCustomer	Yes or no
branchNo	B000 – B999
channel	Offline or online application
contactNo officeContactNo providedAccNo	Landline: 0200000000 – 0900000000 or 00200000000 – 00900000000 Mobile: 09000000000 – 09999999999 or 0090000000000 – 0099999999999
creditCardType	Current, savings, payroll or credit card
creditLimit	1 – 9999999
creditScore	1 – 999
customerNo	First 4 characters: The current year applied Fifth character: “-“ or dash Last 5 character: 00000 – 99999
staffNo	Manager: BM00000 – BM99999 Underwriter: UW00000 – UW99999 Loan Processor: LP00000 – LP99999 Loan Officer: LO00000 – LO99999

disburseAmount loanAmount maxFinancedAmt monthlyPayment monthlySalary outstandingBal paymentAmount reqLoanAmt	1 – 999999
disburseChannel	Office or bank
DOB	As long as more than 21 years old of age
employmentType	Employed, full or part owner
flatInterestRate	0.1 – 1
loanStatus	Approved, suspended or decline
LOS yearsInResidency	1 – 99
nationality	Nationality around the world

Conceptual Data Model of Loan Management System for AB Finance Corporation

