

LoanManagementSystem

Database model documentation

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1. Model details

Model name:

LoanManagementSystem

Version:

2.3

Database engine:

Microsoft SQL Server

Description:

2. Tables

2.1. Table BankDetails

Description:

This table will have reference data for Banks

2.1.1. Columns

Column name	Type	Properties	Description
BankDetailId	bigint	PK	Primary Key to identify a record in the table
BankName	varchar(60)		Name of the Bank
IfscCode	varchar(20)		IFSC Code of the bank
BankBranch	varchar(100)		Branch Name of the Bank
BankAddress	varchar(250)	null	Address of the branch
BankCity	varchar(60)	null	City name of the bank branch
BankDistrict	varchar(60)	null	District name of the bank branch
BankState	varchar(30)	null	State name of the branch
IsActive	char(1)		Active record to check whether the branch is working or its closed
CreatedBy	varchar(20)		Record Created by
CreatedOn	datetime2(3)		Record CreatedOn
UpdatedBy	varchar(20)	null	Record Updated by
UpdatedOn	datetime2(3)	null	Record updated on

2.1.2. Alternate keys

Key name	Columns	Description
BankDetails_IfscCode	IfscCode	

2.2. Table LoanDetailsStaging

Description:

This table will have staging data for loan details received

2.2.1. Columns

Column name	Type	Properties	Description
LoanDetailsStagingId	bigint	PK	Primary Key
AdminUserId	int		User id to fetch that record was inserted by which user
BankName	nvarchar(max)		Name of the Bank
IfscCode	nvarchar(max)		IFSC Code of the bank branch
LoanAccountNumber	nvarchar(max)		Loan account number
BeneficiaryName	nvarchar(max)		Beneficiary Name
LoanOpenDateTime	nvarchar(max)		Opening date of Loan
TotalLoanAmount	nvarchar(max)		Total Loan amount
AmountPaid	nvarchar(max)		Amount Paid till now
RemainingAmount	nvarchar(max)		Remaining Amount
LoanStatus	nvarchar(max)		Status of the Loan
RecordProcessed	char(1)		Record is processed or not
CreatedBy	varchar(20)		Record created by
CreatedOn	datetime2(3)		Record Created on

2.3. Table LoanDetails

Description:

This Transaction table will have basic loan amount details

2.3.1. Columns

Column name	Type	Properties	Description
LoanDetailId	bigint	PK	Primary key to identify a record
BankDetailId	bigint		Foreign Key To get the details of bank
LoanAccountNumber	numeric(20,0)		detail of Loan account number
BeneficiaryName	varchar(35)		Beneficiary Name
LoanOpenDateTime	datetime2(0)		Opening date of Loan account

LoanStatusId	int		What is the Loan Status it can have three value Pending, Active, Processed
LoanClosedDateTime	datetime2(0)	null	When is the loan closed
CreatedBy	varchar(20)		Record created by
CreatedOn	datetime2(3)		Record created on
UpdatedBy	varchar(20)	null	Record updated by
UpdatedOn	datetime2(3)	null	Record updated on

2.4. Table LoanAmountDetails

Description:

This table will have overall Loan Amount Details

2.4.1. Columns

Column name	Type	Properties	Description
LoanAmountDetailId	bigint	PK	Primary key to identify a record in the table
LoanDetailId	bigint		Foreign Key This column will tell the amount details of respective loan based on LoanDetailId
TotalLoanAmount	decimal(24,2)		Total Loan Amount
AmountPaid	decimal(24,2)		Amount paid till now
RemainingAmount	decimal(24,2)		Remaining Amount in the loan account
IsActive	char(1)		This column will tell the most active record for the loan account.
CreatedBy	varchar(20)		Record created by
CreatedOn	datetime2(3)		Record created on
UpdatedBy	varchar(20)	null	Record updated by
UpdatedOn	datetime2(3)	null	Record updated on

2.5. Table ContributorUserAccountDetails

Description:

This table contains basic information of user accounts

2.5.1. Columns

Column name	Type	Properties	Description
ContributorUserAccountDetailID	bigint	PK	Primary key To identify record in the table
FirstName	varchar(20)	null	First Name of the contributor
LastName	varchar(20)	null	Last Name of the contributor
FullName	varchar(40)	null	Full name of the contributor
UserName	varchar(30)	null	User Name of the contributor
Gender	varchar(15)	null	Gender of the contributor
Email	varchar(50)	null	E-mail Id of the contributor
CountryCode	char(4)	null	Country Code of the contributor
MobileNumber	varchar(10)	null	Mobile number of the contributor
Country	varchar(20)	null	Country Name of the contributor
IsAccountVerified	char(1)		Is account verified or not
CreatedBy	varchar(20)		Record created by
CreatedOn	datetime2(3)		Record created on
UpdatedBy	varchar(20)	null	Record updated by
UpdatedOn	datetime2(3)	null	Record updated on

2.5.2. Alternate keys

Key name	Columns	Description
ContributorUserAccountDetails_ak_1	UserName	User name would be unique
ContributorUserAccountDetails_ak_2	Email	Email should be unique
ContributorUserAccountDetails_ak_3	MobileNumber	Mobile Number should also be unique

2.6. Table ContributorUserAccountSessionDetails

Description:

This table contains session details of all contributor users

2.6.1. Columns

Column name	Type	Properties	Description
ContributorUserAccountSessionDetailId	bigint	PK	Primary key To identify record in the table
ContributorUserAccountDetailId	bigint		Respective user account details
SessionStartDateTime	datetime2(5)		Session Start date time
SessionEndDateTime	datetime2(5)	null	Session End date time
CreatedBy	varchar(20)		Record created by
CreatedOn	datetime2(3)		Record created on

2.7. Table ContributorUserAmountDetails

Description:

The table contains information of Amount contributed by Users with the session details

2.7.1. Columns

Column name	Type	Properties	Description
ContributorUserAmountDetailId	bigint	PK	Primary Key Identify a record in the table
ContributorUserAccountDetailId	bigint		Foreign Key Records to fetch respective user account details
TotalAmountContributed	decimal(20,2)		Total amount contributed by a user
LastContributedAmount	decimal(20,2)		Last amount contributed by the user
LastSessionStartDateTime	datetime2(5)	null	Last active session of the user
CreatedBy	varchar(20)		Record Created By
CreatedOn	datetime2(3)		Record created on
UpdatedBy	varchar(20)	null	Record updated by

UpdatedOn	datetime2(3)	null	Record updated on
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2.7.2. Alternate keys

Key name	Columns	Description
ContributorUserAmountDetails_ak_1	ContributorUserAccountDetailId	

2.8. Table ContributorTransactionDetails

Description:

This table contains details of transactions based on an individual contributor

2.8.1. Columns

Column name	Type	Properties	Description
ContributorTransactionDetailId	bigint	PK	Primary Key To identify a record from this table
ContributorUserAccountSessionDetailId	bigint		Foreign Key To get the details of the session
LoanDetailId	bigint		Foreign Key to get the associated loan details for which transaction has been done
AmountContributed	decimal(20,2)		Amount contributed for the loan account
TransactionNumber	varchar(20)		Transaction number of the transaction made
TransactionStatusId	int		Transaction StatusId; it could have three values Pending, Successful and Cancelled
TransactionDateTime	datetime2(5)		Time of the transaction made
CreatedBy	varchar(20)		Record Created By
CreatedOn	datetime2(3)		Record Created On

2.8.2. Alternate keys

Key name	Columns	Description
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ContributorTransactionDetails_ak_1	TransactionNumber	Transaction number would be unique for each transaction
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2.9. Table TransactionStatus

Description:

The table contains reference data for Transaction status like Cancelled, Pending and successful

2.9.1. Columns

Column name	Type	Properties	Description
TransactionStatusId	int	PK	Primary Key To identify a record in the table
TransactionStatusType	varchar(20)		Transaction type: Like pending, cancelled, successful
CreatedBy	varchar(20)		Record Created by
CreatedOn	datetime2(3)		Record Created on

2.10. Table LoanDetailsHistory

Description:

This Transaction table will have History records for loan amount details. This table will hold data of loan accounts that are closed

2.10.1. Columns

Column name	Type	Properties	Description
LoanDetailHistoryId	bigint	PK	Primary key to identify a record
LoanDetailId	bigint		Foreign Key This column will be used to fetch the basic loan details
BankDetailId	bigint		Foreign Key To get bank details associated with the account
LoanAccountNumber	numeric(20,0)		Loan account number
BeneficiaryName	varchar(35)		Beneficiary Name on which loan is taken
LoanOpenDateTime	datetime2(0)		Opening date of loan account

LoanStatusID	int		Status of Loan; only the processed record will get displayed
LoanClosedDateTime	datetime2(0)		closing date of loan account
CreatedBy	varchar(20)		Record created by
CreatedOn	datetime2(3)		Record created on

2.10.2. Alternate keys

Key name	Columns	Description
LoanDetailsHistory_LoanDetailId	LoanDetailId	

2.11. Table AdminUserValidation

Description:

This table will be used to validate login credentials for the admin screen

2.11.1. Columns

Column name	Type	Properties	Description
AdminUserValidationId	int	PK	Primary Key To identify record in the table
AdminUserName	varchar(15)		User Name of the Admin
AdminUserPassword	varchar(15)		Admin user Password
AdminContactEmailId	varchar(40)		
CurrentYN	char(1)		Whether the record is Active or not
CreatedBy	varchar(20)		Record created by
CreatedOn	datetime2(3)		Record Created On
UpdatedBy	varchar(20)	null	Record Updated By
UpdatedOn	datetime2(3)	null	Record Updated On

2.12. Table LoanStatus

Description:

The table contains reference data for Loan status like Closed, Ongoing or Upcoming

2.12.1. Columns

Column name	Type	Properties	Description
LoanStatusId	int	PK	Primary Key To identify a record in the table
LoanStatusType	varchar(20)		loan status type: Like closed, ongoing or upcoming
CreatedBy	varchar(20)		Record Created by
CreatedOn	datetime2(3)		Record Createdon

2.13. Table RejectedLoanDetailsStaging

Description:

This table will have rejected details of Loan staging data for loan details received

2.13.1. Columns

Column name	Type	Properties	Description
RejectedLoanDetailsStagingId	bigint	PK	Primary Key
LoanDetailStagingId	bigint		
AdminUserId	int		User id to fetch that record was inserted by which user
BankName	nvarchar(max)		Name of the Bank
IfscCode	nvarchar(max)		IFSC Code of the bank branch
LoanAccountNumber	nvarchar(max)		Loan account number
BeneficiaryName	nvarchar(max)		Beneficiary Name
LoanOpenDateTime	nvarchar(max)		Opening date of Loan
TotalLoanAmount	nvarchar(max)		Total Loan amount
AmountPaid	nvarchar(max)		Amount Paid till now
RemainingAmount	nvarchar(max)		Remaining Amount
LoanStatus	nvarchar(max)		Status of the Loan
IsProcessed	char(1)		Record is processed or not
CreatedBy	varchar(20)		Record created by
CreatedOn	datetime2(3)		Record Created on

UpdatedBy	varchar(20)	null	Record Updated By
UpdatedOn	datetime2(3)	null	Record Updated on

3. References

3.1. Reference BankDetails_LoanDetails

Description:

! bank can give many loans

BankDetails	1..*	LoanDetails
BankDetailId	<->	BankDetailId

3.2. Reference LoanAmountDetails_LoanDetails

Description:

Loan account may have many inactive records in the transaction table

LoanDetails	1..*	LoanAmountDetails
LoanDetailId	<->	LoanDetailId

3.3. Reference SessionDetails_AccountDetails

Description:

one user will have many sessions

ContributorUserAccountDetails	1..*	ContributorUserAccountSessionDetails
ContributorUserAccountDetailID	<->	ContributorUserAccountDetailId

3.4. Reference

ContributorUserAmountDetails_ContributorUserAccountDetails

Description:

One user will have only 1 record providing the history of his transactions done

ContributorUserAccountDetails	1..1	ContributorUserAmountDetails
ContributorUserAccountDetailID	<->	ContributorUserAccountDetailId

3.5. Reference ContributorTransactionDetails_TransactionStatus

Description:

Transactions can have many status

TransactionStatus	1..*	ContributorTransactionDetails
TransactionStatusId	<->	TransactionStatusId

3.6. Reference TransactionDetails_UserAccountSessionDetails

Description:

In one session user can contribute many number of times

ContributorUserAccountSessionDetails	1..*	ContributorTransactionDetails
ContributorUserAccountSessionDetailId	<->	ContributorUserAccountSessionDetailId

3.7. Reference ContributorTransactionDetails_LoanDetails

Description:

In one loan many contributors can contribute

LoanDetails	1..*	ContributorTransactionDetails
LoanDetailId	<->	LoanDetailId

3.8. Reference LoanDetailsHistory_LoanDetails

Description:

One loan detail will have one record in History table

LoanDetails	1..1	LoanDetailsHistory
LoanDetailId	<->	LoanDetailId

3.9. Reference LoanDetails_LoanStatus

Description:

Loan details may have multiple status

LoanStatus	0..*	LoanDetails
LoanStatusId	<->	LoanStatusId

3.10. Reference AdminUserValidation_LoanDetailsStaging

Description:

One user can insert Multiple Loan details

AdminUserValidation	1..*	LoanDetailsStaging
AdminUserValidationId	<->	AdminUserId

3.11. Reference LoanDetailsStaging_RejectedLoanDetailsStaging

Description:

One loan detail staging record will have only one rejected record

LoanDetailsStaging	1..1	RejectedLoanDetailsStaging
LoanDetailsStagngId	<->	RejectedLoanDetailsStagngId

4. Areas

4.1. Admin User Validation subject area

4.1.1. Tables

- [AdminUserValidation](#)

4.1.2. References

- [BankDetails_LoanDetails](#)
- [LoanAmountDetails_LoanDetails](#)
- [SessionDetails_AccountDetails](#)
- [ContributorUserAmountDetails_ContributorUserAccountDetails](#)
- [ContributorTransactionDetails_TransactionStatus](#)
- [TransactionDetails_UserAccountSessionDetails](#)
- [ContributorTransactionDetails_LoanDetails](#)
- [LoanDetailsHistory_LoanDetails](#)
- [LoanDetails_LoanStatus](#)
- [AdminUserValidation_LoanDetailsStaging](#)
- [LoanDetailsStaging_RejectedLoanDetailsStaging](#)

4.2. Farmer Loan Details Staging subject area

4.2.1. Tables

- [LoanDetailsStaging](#)
- [RejectedLoanDetailsStaging](#)

4.2.2. References

- [BankDetails_LoanDetails](#)
- [LoanAmountDetails_LoanDetails](#)
- [SessionDetails_AccountDetails](#)
- [ContributorUserAmountDetails_ContributorUserAccountDetails](#)
- [ContributorTransactionDetails_TransactionStatus](#)
- [TransactionDetails_UserAccountSessionDetails](#)
- [ContributorTransactionDetails_LoanDetails](#)
- [LoanDetailsHistory_LoanDetails](#)
- [LoanDetails_LoanStatus](#)
- [AdminUserValidation_LoanDetailsStaging](#)
- [LoanDetailsStaging_RejectedLoanDetailsStaging](#)

4.3. Farmer Loan Details subject area

4.3.1. Tables

- [BankDetails](#)

- LoanDetails
- LoanAmountDetails
- LoanDetailsHistory
- LoanStatus

4.3.2. References

- BankDetails_LoanDetails
- LoanAmountDetails_LoanDetails
- SessionDetails_AccountDetails
- ContributorUserAmountDetails_ContributorUserAccountDetails
- ContributorTransactionDetails_TransactionStatus
- TransactionDetails_UserAccountSessionDetails
- ContributorTransactionDetails_LoanDetails
- LoanDetailsHistory_LoanDetails
- LoanDetails_LoanStatus
- AdminUserValidation_LoanDetailsStaging
- LoanDetailsStaging_RejectedLoanDetailsStaging

4.4. Contributor details subject area

4.4.1. Tables

- ContributorUserAccountDetails
- ContributorUserAccountSessionDetails
- ContributorUserAmountDetails
- ContributorTransactionDetails
- TransactionStatus

4.4.2. References

- BankDetails_LoanDetails
- LoanAmountDetails_LoanDetails
- SessionDetails_AccountDetails
- ContributorUserAmountDetails_ContributorUserAccountDetails
- ContributorTransactionDetails_TransactionStatus
- TransactionDetails_UserAccountSessionDetails
- ContributorTransactionDetails_LoanDetails
- LoanDetailsHistory_LoanDetails
- LoanDetails_LoanStatus
- AdminUserValidation_LoanDetailsStaging
- LoanDetailsStaging_RejectedLoanDetailsStaging