Project Proposal

Prepared for: Academic Project

Prepared by: A Kamil Khan

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Objective

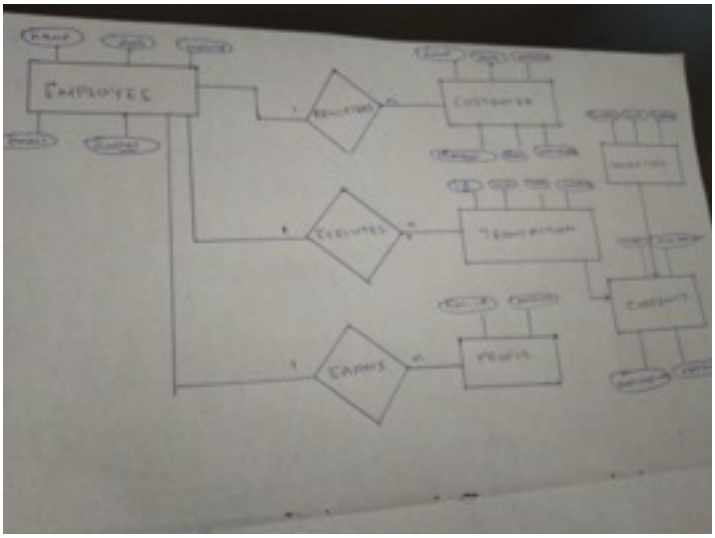
Design a Database Design including Entity Relationship, Relational Database, Normalisation of tables and with Sample Queries

Goals

1. Understand the enduser needs to run a single branch Money Exchange System
2. Design Tables with Primary Key and Foreign key constraints
3. Entity Relationship Diagram
4. Relational Database
5. Sample Queries

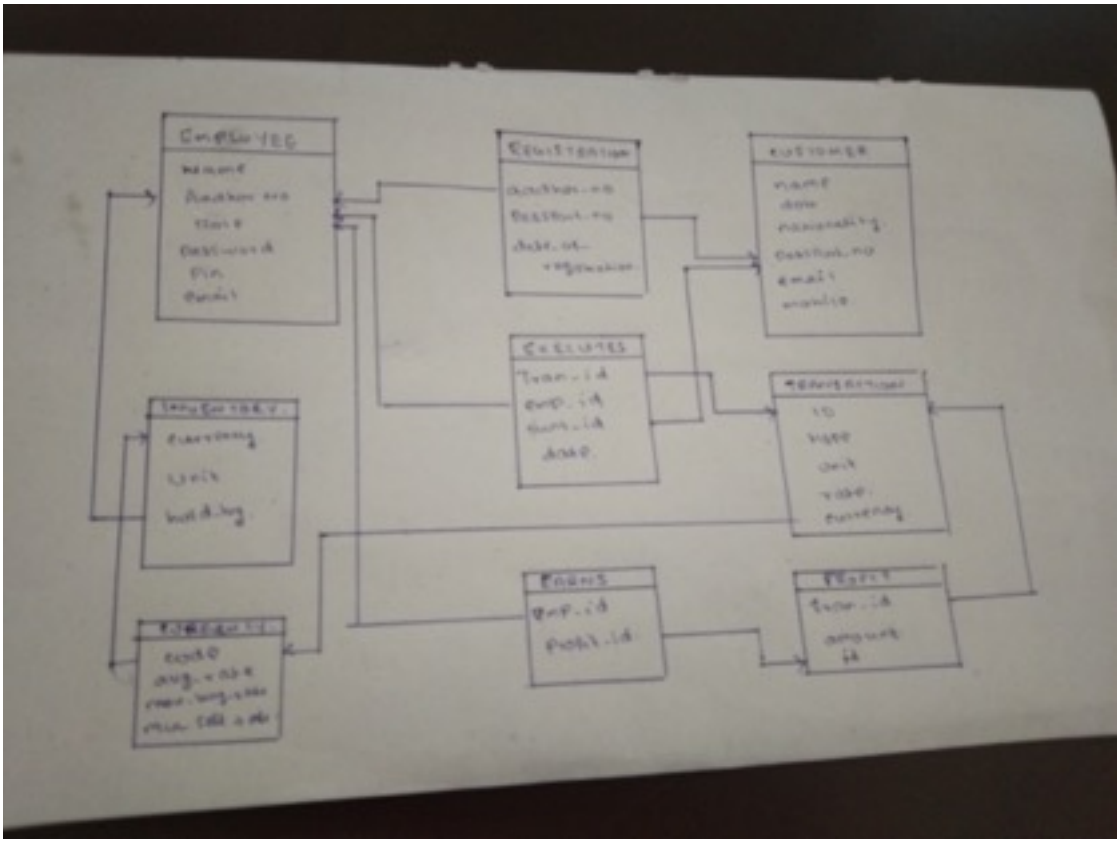
MONEY EXCHANGE SYSTEM - DATABASE DESIGN

ER DIAGRAM:



MONEY EXCHANGE SYSTEM - DATABASE DESIGN

RELATIONAL DATABASE DIAGRAM:



TABLES:

Customer

Passport_no	varchar(20)	Primary Key
Name	varchar(20)	Not Null
DOB	date	Not Null

Nationality	varchar(20)	Not Null
Pin	varchar(20)	Not Null
Address	varchar(200)	Not Null
email	varchar(20)	
mobile	varchar(10)	Not Null

Employee

AadharNo	varchar(200)	Primary
Name	varchar(200)	Not Null,
Role	varchar(20)	Not Null
Password	varchar(20)	Not Null
pin	varchar(20)	
email	varchar(20)	Not Null

Registration

aadhar_no	varchar(20)	primary key	foreign key refers aadhar_no(employee)
passport_no	varchar(20)	primary key	foreign key refers passport_no(customer)
date_of_registration	date		

Currency

code	varchar(20)	Primary
Average_rate	double	not null
Max_Buy_Rate	double	not null
Min_Sell_Rate	double	not null
Name	varchar(20)	

Inventory

Currency	varchar(20)	Foreign Key (code in Currency)
Unit	double	Not Null
Hold_By	varchar(20)	Foreign Key (aadhar no in Employee)

Transaction

ID	integer	primary
currency	varchar(20)	Foreign key (code in currency)
type	varchar(20)	not null
unit	double	
rate	double	

Execution

Transaction_ID	integer	primary key	foreign key refers id(transaction)
Employee_ID	varchar(20)	primary key	foreign key refers aadhar_no(employee)
Customer_ID	varchar(20)	primary key	foreign key refers passport_no(customer)
date	date		

Earns

Employee_ID	varchar(20)	primary key	foreign key refers to aadhar_no(employee)
profit_id	integer	primary key	foreign key refers to id(profit)

Profit

ID	integer		
transaction_id	integer	foreign key (id in transaction)	
amount	double		

QUERIES:

1. List all British Customers

select * from customer where nationality = “British”

2. calculate the profit earned by employee “Andrew”

select sum(amount) from profit where transaction_id (select transaction_id from execution where employee_id = (select aadhar_no from employee where name = “Andrew”))

3. List all the transactions done on 29th Oct 2019

select * from transaction where id in (selection transaction_id from execution where time_of_transaction = “29-10-2019”)

4. List all the buys made by employee “Bob”

select * from transaction where type = “Buy” and id in (selection transaction_id from execution where employee_id = (select aadhar_no from employee where name = “Bob”))

5. List all USD sell transactions

select * from transaction where type = “Sell” and currency = “USD”

6. List the transactions with amount

select id, done_by,rate * unit as amount from transaction

7. Find the transactions done by customer ‘Steve”

select * from transaction where id in (selection transaction_id from execution where customer = (select passport_no from customer where name = “Steve”))

8. Delete all customers from Srilanka

delete from customers where nationality = “Sri Lanka”

9. Give a snap shot of total inventory

select sum(unit)*avg_rate,currency from inventory group by currency

10. List down all the tellers in the shop

select * from employee where role = “Teller”