

Sri Lanka Institute of Information Technology



# Tea Factory Management System

## Database Diagram

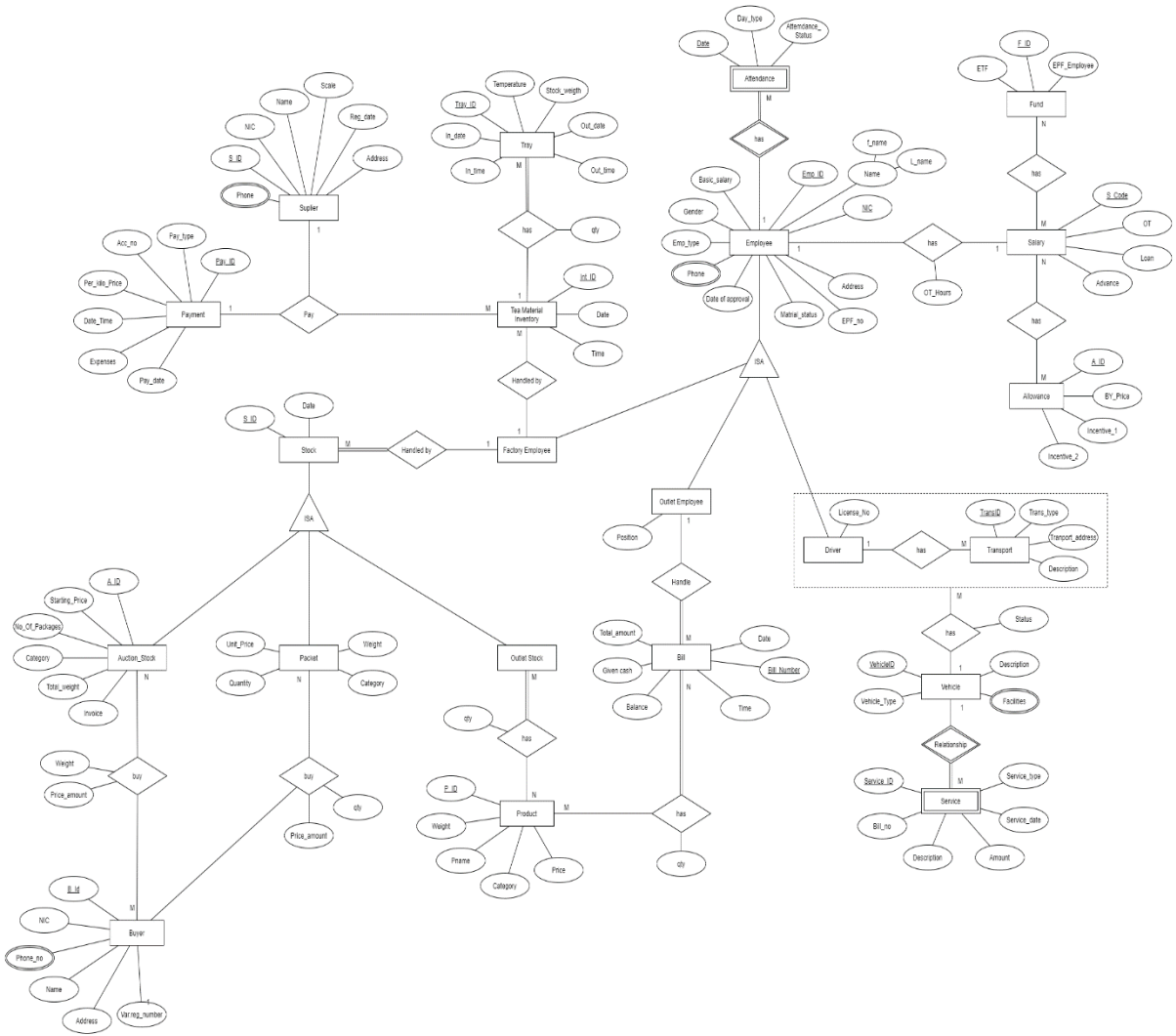
Information Technology Project – IT2080

2021

Project Group ID: ITP2021\_S2\_WE\_G09

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# ER Diagram



# Schema Refinement

## 1) Supplier

<u>S_ID</u>	NIC	Name	Scale	Reg_date	Address
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## 2) Supplier\_Phone

<u>S_ID</u>	<u>Phone_No</u>
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FOREIGN KEY(S\_ID) REFERENCES Supplier(S\_ID)

## 3) Payment

<u>Pay_ID</u>	Pay_type	Acc_no	Per_kilo_Price	Date_Time	Expenses	Pay_date
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## 4) Tea\_Material

<u>Int_ID</u>	Date	Time
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## 5) Supplier\_Payment

<u>S_ID</u>	<u>Int_ID</u>	<u>Pay_ID</u>
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FOREIGN KEY(S\_ID) REFERENCES Supplier(S\_ID)

FOREIGN KEY(Int\_ID) REFERENCES Tea\_Material(Int\_ID)

FOREIGN KEY(Pay\_ID) REFERENCES Payment (Pay\_ID)

## 6) Tray

<u>Tray_ID</u>	In_date	In_time	Temperature	Stock_weight	Out_date	Out_time	<u>Int_ID</u>
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FOREIGN KEY(Int\_ID) REFERENCES Tea\_Material(Int\_ID)

## 7) Employee

<u>Emp_ID</u>	f_name	l_name	NIC	Address	Gender	Maternal_status	Emp_type
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Date_of_approval	Basic_salary	EPF_no	Position	License_No	Type
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## 8) Employee\_phone

<u>Emp_ID</u>	<u>Phone_No</u>
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FOREIGN KEY(Emp\_ID) REFERENCES Employee (Emp\_ID)

## 9) Employee\_attendance

<u>Emp_ID</u>	<u>Date</u>	Day_type	Attendance_Status
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FOREIGN KEY(Emp\_ID) REFERENCES Employee (Emp\_ID)

## 10) Salary

<u>S_Code</u>	OT	Loan	Advance	<u>Emp_ID</u>	OT_Hours
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FOREIGN KEY(Emp\_ID) REFERENCES Employee (Emp\_ID)

11) Fund

<u>F_ID</u>	ETF	EPF_Employee
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12) Allowance

<u>A_ID</u>	BY_Price	Incentive_1	Incentive_2
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13) Salary\_Fund

<u>S_Code</u>	<u>F_ID</u>
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FOREIGN KEY(S\_Code) REFERENCES Salary(S\_Code)

14) Salary\_Allowance

<u>S_Code</u>	<u>A_ID</u>
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FOREIGN KEY(S\_Code) REFERENCES Salary(S\_Code)

15) Vehicle

<u>VehicleID</u>	Vehicle_Type	Description
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16) Vehicle\_Facility

<u>VehicleID</u>	<u>Facility</u>
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FOREIGN KEY(VehicleID) REFERENCES Vehicle (VehicleID)

17) Transport

<u>TransID</u>	Trans_type	Transport_address	Description	<u>Emp_ID</u>	<u>VehicleID</u>	Status
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FOREIGN KEY(Emp\_ID) REFERENCES Employee (Emp\_ID)

FOREIGN KEY(VehicleID) REFERENCES Vehicle (VehicleID)

18) Service

<u>VehicleID</u>	<u>Service_ID</u>	Service_Type	Service_date	Bill_no	Amount	Description
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FOREIGN KEY(VehicleID) REFERENCES Vehicle (VehicleID)

19) Bill

<u>Bill_Number</u>	Date	Time	Total_amount	Given_cash_amount	Balance	Emp_ID
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20) Product

<u>P_ID</u>	Pname	Category	Weight	Price
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21) Bill\_Product

<u>Bill_Number</u>	<u>P_ID</u>	qty
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FOREIGN KEY(Bill\_Number) REFERENCES Bill (Bill\_Number)

FOREIGN KEY(P\_ID) REFERENCES Product(P\_ID)

22) Buyer

<u>B_ID</u>	NIC	Name	Address	Var.reg_number
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23) Buyer\_Phone

<u>B_ID</u>	<u>Phone_No</u>
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FOREIGN KEY(B\_ID) REFERENCES Buyer(B\_ID)

24) Auction\_Stock

<u>S_ID</u>	<u>A_ID</u>	Date	Starting_Price	No_of_Packages	Category	Total_weight	Invoice
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<u>Emp_ID</u>
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FOREIGN KEY(Emp\_ID) REFERENCES Employee (Emp\_ID)

25) Auction\_Stock\_Buyer

<u>S_ID</u>	<u>A_ID</u>	<u>B_ID</u>
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FOREIGN KEY(S\_ID) REFERENCES Auction\_Stock(S\_ID)

FOREIGN KEY(A\_ID) REFERENCES Auction\_Stock(A\_ID)

FOREIGN KEY(B\_ID) REFERENCES Buyer(B\_ID)

26) Packet

<u>S_ID</u>	Date	Category	Weight	Quantity	Unit_Price	<u>Emp_ID</u>
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FOREIGN KEY(Emp\_ID) REFERENCES Employee (Emp\_ID)

27) Packet\_Buyer

<u>S_ID</u>	<u>B_ID</u>	qty	Price_Amount
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FOREIGN KEY(S\_ID) REFERENCES Packet(S\_ID)

FOREIGN KEY(B\_ID) REFERENCES Buyer(B\_ID)

28) Outlet\_Stock

<u>S_ID</u>	Date	<u>Emp_ID</u>
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FOREIGN KEY(Emp\_ID) REFERENCES Employee (Emp\_ID)

29) Outlet\_Stock\_Product

<u>S_ID</u>	<u>P_ID</u>	qty
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FOREIGN KEY(S\_ID) REFERENCES Outlet\_Stock(S\_ID)

FOREIGN KEY(P\_ID) REFERENCES Product(P\_ID)

### Supplier

<u>S_ID</u>	NIC	Name	Scale	Reg_date	Address
S001	985689745V	Nimal	20	8/8/2021	Colombo
S002	965874521V	Chamuditha	54	8/8/2021	Kandy
S003	954257854V	Perera	40	8/9/2021	Galle

### Supplier Phone

<u>S_ID</u>	Phone_no
S001	0701589635
S002	0775896321
S003	0717458965

### Payment

<u>Pay_ID</u>	Pay_type	Acc_no	Per_Kilo_Price	Date	Time	Pay_date
P001	Cash	1254789	1000	8/8/2021	4.00p.m	8/8/2021
P002	Cash	2547896	5000	8/9/2021	8.30a.m.	8/9/2021
P003	Cash	1257896	6000	8/10/2021	10.00.a.m	8/8/2021

### Tea Material

<u>Int_Id</u>	Date	Time
I001	8/10/2021	11.00a.m.
I002	8/12/2021	10.20a.m.
I003	8/12/2021	11.30a.m

### Supplier Payment

<u>S_ID</u>	<u>Int_ID</u>	<u>Pay_ID</u>
S001	I001	P001
S002	I002	P002
S003	I003	P003

## Tray

Tray_ID	IN_date	In_Time	Temperature	Stock_weight	Out_date	Out_time	Int_ID
Tr001	8/8/2021	10.00a.m	36.5	5000	8/8/2021	2.00p.m	I001
Tr002	8/9/2021	8.30a.m.	38.0	8600	8/9/2021	4.00p.m.	I002
Tr003	8/10/2021	9.00a.m	37.5	6500	8/10/2021	2.30p.m.	I003

## Employee

EMP_ID	F_name	L_name	NIC	Address	Gender	Emp_Type	Date of Approval	Basic_salary	EPF_no	Type	License no	Position
Emp001	Subil	herath	02254V	Matara	Male	Driver	8/8/2021	45000.00	49	Permanent	70A	Clerk
Emp002	Kasun	Kumar	02524V	Kandy	Male	Factory Employee	8/9/2021	65000.00	11	Temporary	55B	Manager
Emp003	Nimal	Perera	04578V	Galle	Male	Outlet Employee	8/10/2021	85000.00	27	Permanent	27D	Officer

## Employee Phone

EMP_ID	Phone_no
Emp001	0714588965
Emp002	0775896652
Emp003	0701589932

## Employee Attendance

EMP_ID	Date	Day_type	Attendance_Status
Emp001	8/10/2021	Monday	No
Emp002	8/13/2021	Thursday	Yes
Emp003	8/16/2021	Sunday	Yes

## Salary

S_Code	OT	Loan	Advance	EMP_ID	OT_Hours
SC0001	05	500000.00	45000.00	Emp001	05
SC002	04	600000.00	20000.00	Emp002	04
SC003	03	450000.00	10000.00	Emp003	06

#### Fund

<u>F_ID</u>	ETF	EPF_employee
F001	1250.00	100 000.00
F002	875.00	85 000.00
F003	999.00	120 000.00

#### Allowance

<u>A_ID</u>	Price (RS.)	Incentive_1	Incentive_2
A001	5000.00	3200.00	1800.00
A002	8400.00	3400.00	5000.00
A003	9658.00	5908.00	3750.00

#### Salary Fund

<u>S_code</u>	<u>F_ID</u>
SC001	F001
SC002	F002
SC003	F003

#### Salary Allowance

<u>S_code</u>	<u>A_ID</u>
SC001	A001
SC002	A002
SC003	A003

#### Vehicle

<u>VehicleID</u>	Vehicle_type	Description
V001	Lorry	Heavy vehicles
V002	Van	Light vehicles
V003	Lorry	Heavy vehicles



### Vehicle Facility

<u>VehicleID</u>	Facility
V001	Normal
V002	Luxury
V003	Semi-Luxury

### Transport

<u>TransID</u>	Trans_type	Transport Address	Description	<u>EMP_ID</u>	<u>VehicleID</u>	Status
T001	Normal	Colombo	Heavy vehicles	Emp001	V001	Complete
T002	Speed	Galle	Heavy vehicles	Emp002	V002	Complete
T003	Speed	Kandy	Light vehicles	Emp003	V003	Pending

### Service

<u>Vehicle_ID</u>	<u>Service_ID</u>	Service_Type	Service Date	<u>Bill_number</u>	Amount	Description
V001	Ser001	Full Service	8/8/2021	Bill001	8000.00	Full service
V002	Ser002	Full Service	8/9/2021	Bill002	7500.00	Body Wash
V003	Ser003	Body wash	8/10/2021	Bill003	6500.00	Painting

### Bill

<u>Bill_number</u>	Date	Time	Total Amount	Given cash	Balance	<u>EMP_ID</u>
Bill001	8/8/2021	2.00p.m	45000.00	30000.00	15000.00	Emp001
Bill002	8/9/2021	4.00p.m.	50000.00	40000.00	10000.00	Emp002
Bill003	8/10/2021	2.30p.m.	85000.00	65000.00	20000.00	Emp003

### Product

<u>P_ID</u>	Pname	Category	Weight (kg)	Price
P001	KaleyTea	Tea packet	1500	15000.00
P002	KaleyTea	Tea packet	2500	25000.00

P003	KaleyTea	Tea packet	2000	20000.00
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#### Bill Product

<u>Bill number</u>	<u>P_ID</u>	qty
Bill001	P001	1000
Bill002	P002	200
Bill003	P003	3000

#### Buyer

<u>B_ID</u>	NIC	Name	Address	Var.reg number
Buyer001	9874562147V	Sudesh	Matara	0520
Buyer002	9745875856V	Chamli	Hambantota	0521
Buyer003	9687458965V	Kasun	Kandy	0522

#### Buyer Phone

<u>B_ID</u>	Phone no
Buyer001	0714589963
Buyer002	0715896325
Buyer003	0714895623

#### Auction Stocks

<u>S_ID</u>	<u>A_ID</u>	Date	Start Price	No of Packets	Category	Total Weight	Invoice	<u>EMP_ID</u>
S001	A001	8/8/2021	1000.00	750	Packet	7500		Emp001
S002	A002	8/10/2021	2000.00	582	Packet	5000		Emp002
S003	A003	9/15/2021	3000.00	960	Packet	9600		Emp003

#### Auction Stock Buyer

<u>S_ID</u>	<u>A_ID</u>	<u>B_ID</u>
S001	A001	Buyer001
S002	A002	Buyer002

S003	A003	Buyer003
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#### Packet

<u>S_ID</u>	Date	Category	Weight(kg)	Quantity	Unit_price	<u>EMP_ID</u>
S001	8/10/2021	Packet	500	1000	9000.00	Emp001
S002	8/15/2021	Packet	250	500	7000.00	Emp002
S003	8/19/2021	Packet	750	2000	12000.00	Emp003

#### Packet Buyer

<u>S_ID</u>	<u>B_ID</u>	qty	Price Amount
S001	Buyer001	1500	8500.00
S002	Buyer002	2100	15000.00
S003	Buyer003	3620	25000.00

#### Outlet Stock

<u>S_ID</u>	Date	<u>EMP_ID</u>
S001	8/8/2021	Emp001
S002	8/13/2021	Emp002
S003	8/17/2021	Emp003

#### Outlet Stock Product

<u>S_ID</u>	<u>P_ID</u>	qty
S001	P001	1000
S002	P002	5050
S003	P003	2000