Sri Lanka Institute of Information Technology

Group MLB_08.02_10

Identity Issuing Service for Factory

IT1090 – Information Systems and Data Modeling

(ISDM)

B.Sc. (Hons) in Information Technology

Group Details

Group MLB_08.02_10

	Student Registration Number	Student Name
1	IT21167478	Nilupul S.A
2	IT21169694	K.A.D.P.Kodithuwakku
3	IT21167232	P.M.R.S.Anjalee
4	IT21155598	Dilshan K.A.R
5	IT21157882	H.G.K.D. Premathilaka

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Hypothetical Scenario

This describes an organization's identity issuing service. Here are the steps you can take to begin the process of preparation for mediation. An identity card is very important to verify the identity of the employees of an organization. Therefore, the employees should enter the information they need here and provide the required information to the identity card. To join the factory using this website, new employees must first register and fill out a job application. When a new employee registers on this site, they go to the form manager and ask for permission in the area where they can create an ID. Employees currently employed in the factory can also visit the website and enter their personal information, vacation information, identity cards and payment slips. This is designed so that employees can get IDs with their employee numbers once they have entered their data into the system correctly.

Requirements Analysis

Main Requirements of the system

The Identity issuing Service website is completely based on All Identity Issuing system. This system is developed based on the requirements. The requirements can be divided into three parts as, Functional requirement, non – functional requirement, and external interface requirement.

Functional Requirements

Functional requirements are related to the technical functionality of this system. Functional requirements are based on how the users will interact with the system. Also, this system has several main function requirements. These are,

- User requirements (Employee)
- Administrator requirements (Technician Manager)
- ID Issuing Sector requirements (Id Issuing Sector)

User Requirements

- The visitor can only view home page of website
- The Visitor can register to the website and he/she become member of this system
- The user should give correct Email and password to login to the system
- Administrator and Developer able to access both front end and back end of this system.
- User can access Fill id issuing form and If is Register Member Can See Salary and other Essential.
- User can use contact us
- User can manage or edit profile
- User can access the social media through the links
- If user has any problem about Id issuing form can directly send to message to Technician.

Administrator Requirements

- Admins able to access both front end and back font of the system.
- Admins confirm Full fill Applications
- Admins help to solve technical problems
- Admins generates Approved.
- Admins check the progress of website
- Admins manages the website and maintain
- Admins can add and remove user
- Admins can manage all financial process

Id Issuing Sector Requirements

- Id Issuing Sector updates all Complete Ids
- Id Issuing Sector check system current update details
- Id Issuing Sector can add new functions for system
- Id Issuing Sector testing and evaluation the new program
- Id Issuing Sector update security errors and fix the error

Non-Functional Requirements

Performance requirements

- The administrator has the authority to add, modify, delete, and upgrade properties.
- The system should be accessed quickly.
- Load the web pages from the website within seconds.
- The system database should be accommodating a high number of users without any fault.

Security requirements

- Users can just read information, but they cannot edit or modify anything except their details.
- The password must never be visible at the time of entry or at any other time.
- To avoid unauthorized entry, the system will verify members and administrators when logging in.
- Outside of the scheme, the user's private data is protected.

Usability

- The website interface must be easy to work for customer without any problem
- User should be able to access and view known pages
- Visualize the data collected from your users

Reliability

- Completion of the order given on the due date.
- Do not provide customer private data to another party.
- Correctly enter the ID given by the data provided by the customer.
- To maintain the reliability of the customer, the website should respond promptly to their valuable comments and suggestions.

Data requirements of the system

- Manager
  - Manager ID (mID)
  - Manager Name (mName)
  - Manager Date of birth (mDob)
  - Manager Department (mDep)

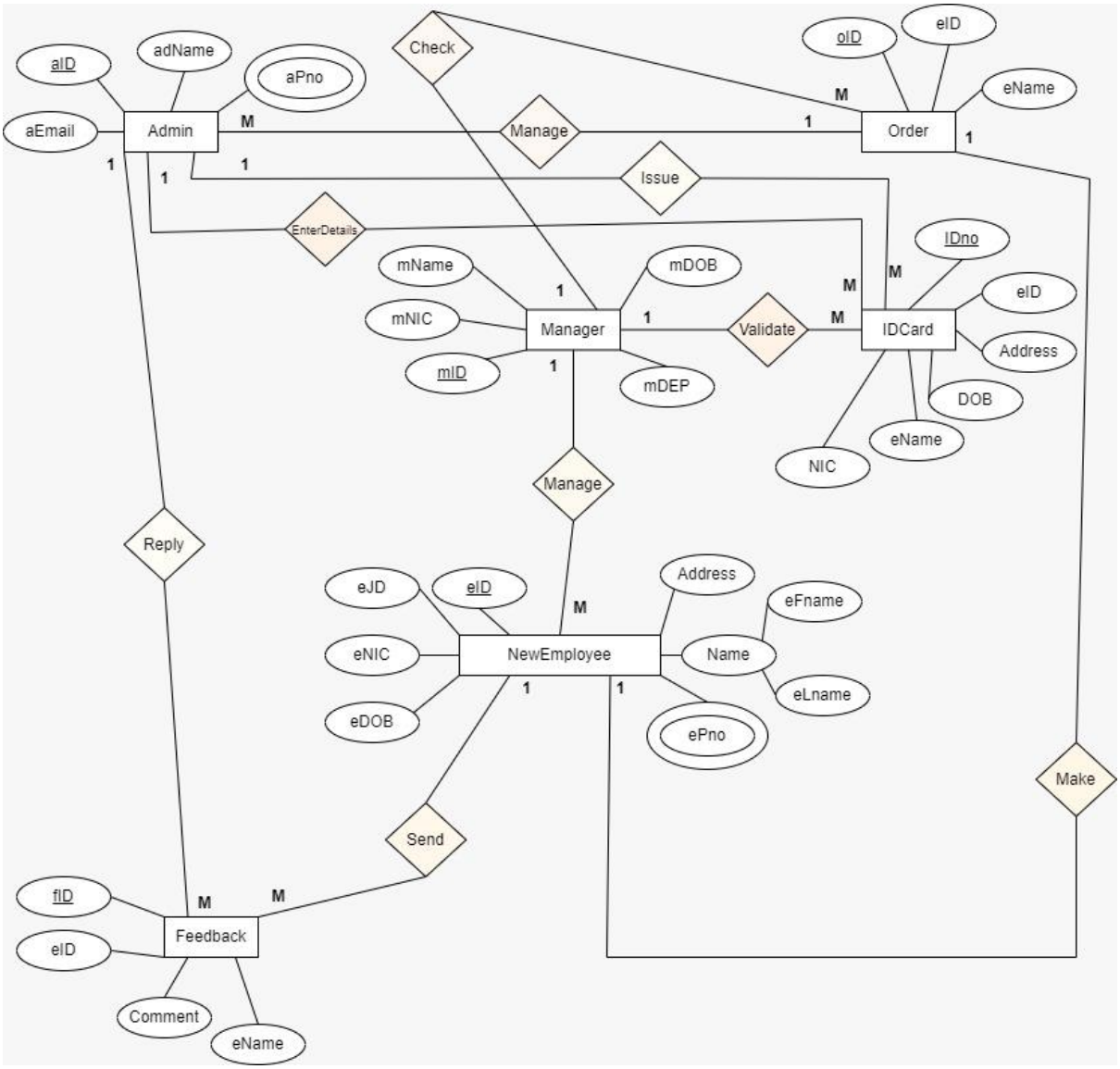
- Admin
  - Admin ID (aID)
  - Admin Name (adName)
  - Admin Email (aEmail)
  - Admin phone Number (aPno)

- Order
  - Order ID (oID)

- Feedback
  - Feedback ID (fID)
  - Feedback Comment (Comment)
  - Feedback Date (fDate)

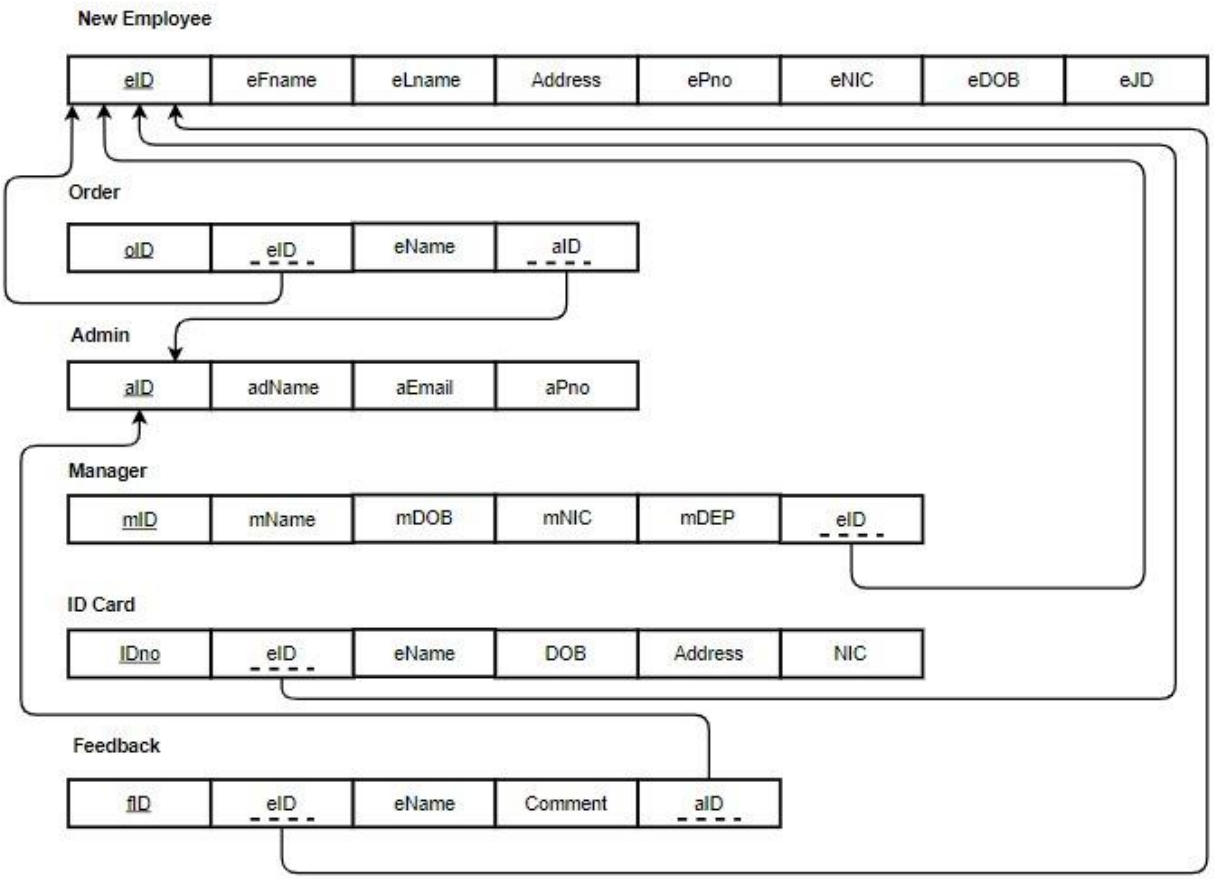
- New employee
  - Employee Id (eID)
  - Employee First Name (eFname)
  - Employee Last Name (eLname)
  - Employee Phone Number (ePno)
  - Employee Date of birth (eDob)
  - Employee Address (eAddress)
  - Employee Nic (eNic)
  - Employee joined date (eJd)

ER diagram


Check
oID
eID
aID
adName
aPno
eName
M
aEmail
Admin
M
Manage
1
Order
1
1
1
1
Issue
EnterDetails
IDno
mName
mDOB
M
M
eID
1
mNIC
Manager
1
Validate
M
IDCard
Address
mID
1
mDEP
DOB
eName
NIC
Manage
Reply
Address
eJD
eID
eFname
M
eNIC
NewEmployee
Name
eLname
1
1
eDOB
ePno
Make
Send
fID
M
M
Feedback
eID
Comment
eName

Relational Schema

Relational Data Model



Performance Requirements

Performance is also very special things of a system . We identify some of the preference requirements in our system .

1) Load the web page within minimum few seconds for everyone.
2) The manager can access the details of all employees.
3) Anyone , anytime , anywhere Ability to visit the website using any device or any browser
4) Users have two types. there are registered employee and unregistered employee. Registered users can access the system his lifetime.
5) Registered employees can get information about their length of service , salary and identity cards.
6) The manager can access the details of all employees .
7) System always response the user without any delay
8) Users can their feedback about the productivity of the website .
9) Analysis can check the system and keep it always updating .

Security requirements

Security is also more important part to us . We identify more requirements that need to be improve in our system .

1) When the user creates an account (registered employee and unregistered employee) , necessary details should validate . (Necessary details should include e - mail , passwords . and other requirements)
2) When login to the system , the system will validate members and prevent unauthorized access in every login times
3) Only one user account possible to creates with one email account .
4) The password of user account should be a strength password which is a combination of uppercase letters , lowercase letters , numbers , and special characters .
5) Admin is the only person who can make changes in web site such as changing the interfaces (modifying the web site) and remove user account .
6) Only admin can reply for the feedback and massages , but other users only can read the feedbacks . To add a comment or rating , User must be logged in . If the user is not logged in , ask user to log in to the account .
7) A strong firewall is needed to protect the database of our system .
8) Backup database in real time .
9) Personal information of employees can only be obtained by the HR Manager.

SQL Database Table

1.
```
create table Employe (
        eID varchar(10) NOT NULL,
        eFname varchar(20) NOT NULL,
        eLname varchar(20) NOT NULL,
        eNic int NOT NULL,
        addres varchar(100) NOT NULL,
        eDob date NOT NULL,
        ePno int  NOT NULL,
        eJd date NOT NULL,
        primary key(eID)
);

INSERT INTO Employe VALUES ('E100', 'Amith', 'Nilupul', 2000131314,
'2/B Elpitiya', '2000-09-06', 0770156798, '2019-05-20' )
INSERT INTO Employe VALUES ('E101', 'Kusal', 'Perera', 1999356838,
'37A Ambalangoda', '1999/03/25', 0762313938, '2018/01/23' )
INSERT INTO Employe VALUES ('E102', 'Rashmi', 'Shehela', 1998203802,
'52/3 Anuradapure', '1998/03/15', 0751132393, '2017/10/20' )
INSERT INTO Employe VALUES ('E103', 'Vishmi', 'Mandira', 1995356402,
'65/A Gampaha', '1995/12/25', 0742595238, '2017/01/15' )
INSERT INTO Employe VALUES ('E104', 'Dilan', 'Sanajaya', 1996102375,
'76B2 Mahiyanganaya' ,'1996/01/03', 0781059611, '2016/06/15' )
```

2.
```
create table Manager (
        mID varchar NOT NULL,
        mName varchar NOT NULL,
        mDob date NOT NULL,
        department varchar NOT NULL,
        eID varchar(10) NOT NULL,
        primary key(mID),
        foreign key(eID) references Employe(eID)
);

INSERT INTO Manager VALUES ('M100', 'Ajith Mahanama'
,'1974/01/22','Finance','E020')
INSERT INTO Manager VALUES ('M101', 'Pulathisi Silva' ,
'1969/12/20', 'HR','E021')
INSERT INTO Manager VALUES('M102','Sumith
Kumara','1972/03/23','IDissuing','E022')
INSERT INTO Manager
VALUES('M103','K.Thennakon','1967/05/24','Technician','E023')
```

3.
```
create table Admins (
        aID varchar NOT NULL,
        aName varchar(10) NOT NULL,
        aEmale varchar(10) NOT NULL,
        aPno int NOT NULL,
        primary key(aID)
    );

    INSERT INTO Admins VALUES ('A101',
    'Kamal','kamala1987@gmail.com',0771935251)
    INSERT INTO Admins VALUES ('A102', 'Tehara' , 'tehara123@gmail.com',
    0709307493)
    INSERT INTO Admins VALUES ('A103', 'Nimal' , 'nimalsilva@gmail.com',
    0752323938)
```

4.
```
create table Orders (
        oID int NOT NULL,
        eID varchar(10) NOT NULL,
        eName varchar(10) NOT NULL,
        aID varchar NOT NULL,
        primary key(oID),
        foreign key(eID) references Employe(eID),
        foreign key(aID) references Admins (aID)
    );

    INSERT INTO Orders VALUES ('O101', 'E101' , 'Kusal', 'A101')
    INSERT INTO Orders VALUES ('O102', 'E102' , 'Rashmi', 'A101')
    INSERT INTO Orders VALUES ('O103', 'E103' , 'Vishmi', 'A101')
    INSERT INTO Orders VALUES ('O104', 'E104' , 'Dilan', 'A102')
    INSERT INTO Orders VALUES ('O105', 'E105' , 'Dammika', 'A103')
```

5.
```
create table ID_Card (
        IDno int NOT NULL,
        eFname varchar NOT NULL,
        eLname varchar NOT NULL,
        NIC int NOT NULL,
        addres varchar NOT NULL,
        dOb date NOT NULL,
        eID varchar(10) NOT NULL,
  );

  INSERT INTO ID_Card VALUES ('10010', 'Amith', 'Nilupul', 2000131314,
  '2/B Elpitiya', '2000/09/06', 'E100' )
  INSERT INTO ID_Card VALUES ('10011', 'Kusal', 'Perera', 1999356838,
  '37A Ambalangoda' ,'1999/03/25', 'E101' )
  INSERT INTO ID_Card VALUES ('10012', 'Rashmi', 'Shehela',
  1998203802, '52/3 Anuradapure', '1998/03/15', 'E102' )
  INSERT INTO ID_Card VALUES ('10013', 'Vishmi', 'Mandira',
  1995356402, '65/A Gampaha', '1995/12/25', 'E103' )
  INSERT INTO ID_Card VALUES ('10014', 'Dilan', 'Sanajaya',
  1996102375, '76B2 Mahiyanganaya', '1996/01/03', 'E104' )
```

6.
```
create table Feedback (
        fID int NOT NULL,
        comment varchar(10) NOT NULL,
        eName varchar(10) NOT NULL,
        emp_ID int NOT NULL,
        aID varchar NOT NULL,
        eID varchar(10) NOT NULL,
        primary key(fID),
        foreign key(eID) references Employe(eID),
        foreign key(aID) references Admins (aID)
  );

  INSERT INTO Feedback VALUES ('F100', 'Excellent service very clear
  communication and User Friendly' , 'Dilan' , 'E104' , 'A101')
  INSERT INTO Feedback VALUES ('F101', 'Very soon I got my ID and Good
  service' , 'Malithi' , 'E155' , 'A102')
  INSERT INTO Feedback VALUES ('F102', 'Salaries are good' , 'Kushan'
  , 'E123' , 'A101')
  INSERT INTO Feedback VALUES ('F103', 'Bad experience I did not
  receive my ID' , 'Sarath' , 'E128' , 'A103')
  INSERT INTO Feedback VALUES ('F104', 'having a good team of
  employees is easy to work with them', 'Nethmi' , 'E112', 'A103')
```