SULIT

SECP2523 DATABASE

SESSION 2021/2022, SEMESTER 1

ALTERNATIVE ASSESSMENT REPORT: PHASE 2

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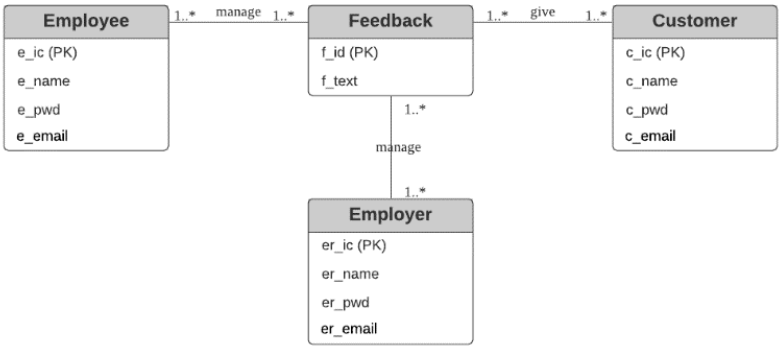
1. Section C

1.1 Relations

<< List the relations derived from the conceptual ERD given in Section B. >>



Feedback (f_id, f_text)
Primary Key: f_id
Foreign Key: u_id
Employee (e_ic, e_name, e_pwd, e_email)
Primary Key: e_ic
Employer (er_ic, er_name, er_pwd, er_email)
Primary Key: er_ic
Customer (c_ic, c_name, c_pwd, c_email)
Primary Key: c_ic

1.2 Normalization

As in previous part, we didn't include the quotation table that the feedback refer to, we added the quotation table here.
We also decided to combine the user customer and employee into one table as it hold the same attribute in sign in/ sign out module.

Feedback (f_id, f_text)
Primary Key: f_id
Foreign Key: u_id
Employee (e_ic, e_name, e_pwd, e_email)
Primary Key: e_ic
Employer (er_ic, er_name, er_pwd, er_email)
Primary Key: er_ic
Customer (c_ic, c_name, c_pwd, c_email)
Primary Key: c_ic

1st Normal Form

Feedback (f_id, f_text, f_date, curr_status, u_id, q_id)
Functional dependency:
- f_id → f_text, f_date, curr_status
- f_date → curr_status

Quotation (q_id, q_date, q_desc, q_service, q_name, q_status)
Functional dependency:
- q_id → q_date, q_desc, q_service, q_name, q_status

Employer (e_id, e_name, e_pwd)
Functional dependency:
- e_id → e_name, e_pwd

User (u_id, u_name, u_pwd, c_email, u_type)
Functional dependency:
- u_id → u_name, u_pwd, c_email, u_type

2nd Normal Form

Feedback (f_id, f_text, u_id, q_id, f_date)
Functional dependency:
- f_id → f_text, f_date, curr_status

Feedback_status (curr_status, f_id)
Functional dependency:
- f_date → curr_status

Quotation (q_id, q_date, q_desc, q_service, q_name, q_status)
Functional dependency:
- q_id → q_date, q_desc, q_service, q_name, q_status

Employer (e_id, e_name, e_pwd)
Functional dependency:
- e_id → e_name, e_pwd

User (u_id, u_name, u_pwd, c_email, u_type)
Functional dependency:
- u_id → u_name, u_pwd, c_email, u_type

3rd Normal Form

Feedback (f_id, f_text, u_id, q_id, f_date)
Functional dependency:
- f_id → f_text, f_date, curr_status

Feedback_status (curr_status, f_id)
Functional dependency:
- f_date → curr_status

Quotation (q_id, q_date, q_desc, q_service, q_name, q_status)
Functional dependency:
- q_id → q_date, q_desc, q_service, q_name, q_status

Employer (e_id, e_name, e_pwd)
Functional dependency:
- e_id → e_name, e_pwd

User (u_id, u_name, u_pwd, c_email, u_type)
Functional dependency:
- u_id → u_name, u_pwd, c_email, u_type

BCNF

Feedback (f_id, f_text, u_id, q_id, f_date)
Functional dependency:
- f_id → f_text, f_date, curr_status

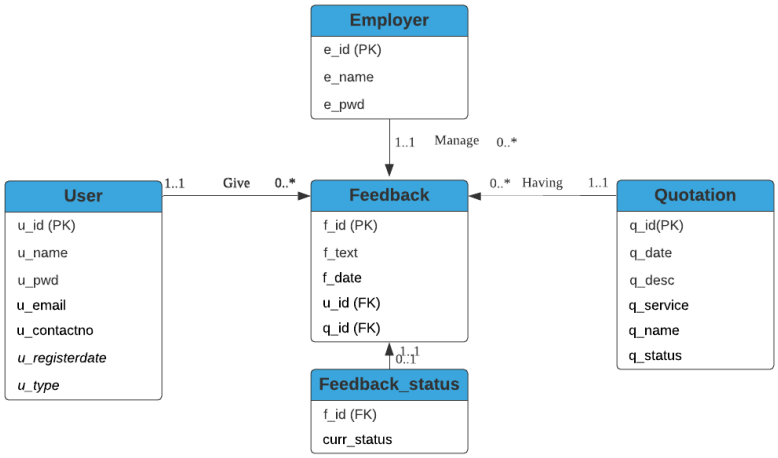
Feedback_status (curr_status, f_id)
Functional dependency:
- f_date → curr_status

Quotation (q_id, q_date, q_desc, q_service, q_name, q_status)
Functional dependency:
- q_id → q_date, q_desc, q_service, q_name, q_status

Employer (e_id, e_name, e_pwd)
Functional dependency:
- e_id → e_name, e_pwd

User (u_id, u_name, u_pwd, c_email, u_type)
Functional dependency:
- u_id → u_name, u_pwd, c_email, u_type

1.3 Logical Data Model



2. Data Dictionary

2.1 Data Dictionary for the global logical ERD

2.1.1 Data Dictionary - Identify Entities

Entity Name	Description	Aliases	Occurrence
User	General term describing all customer and employee exist in the system	End user	Each user has access to the same system, yet their functions are different.
Employer	General term describing all the employer	Admin	Employers can manage the user and access every function of the system.
Feedback	General term describing all the feedback	Issue	Each feedback belongs to a quotation
Quotation	General term describing all the quotation	Quotation	Each quotation is managed by users

2.1.2 Data Dictionary - Identify Relationship Type

Entity Name	Multiplicity	Relationship	Entity Name	Multiplicity
User	0..* 1..1 1..* 1..1 1..1	Manage Request Manage Give enrolled	Employer Service Report Feedback User_quotation	1..1 0..* 0..* 0..* 0..*
Employer	1..1 1..1 1..1	manage manage manage	User Report Feedback	0..* 0..* 0..*
Feedback	0..* 0..* 0..*	Give Having Manage	User Quotation Employer	1..1 1..1 1..1
Quotation	1..1 1..1 1..1 1..1 1..1	related with Having Included Contain	User_quotation Service Feedback Item Report	0..* 1..1 0..* 1..* 1..1

2.1.3 Data Dictionary – Description of Attributes

Entity Name	Attributes	Description	Data Type and Length	Nulls	Multi-valued
User	u_id u_name u_email u_password u_type	ID number of user Name of user Email of user Password of user Type of user	10 integer 50 variable characters 50 variable characters 20 variable characters 20 variable characters		No No No No No
Employer	e_id e_name e_pwd	Employer ID number Username of Employer	10 integer 50 variable characters 50 variable characters		No No No
Feedback	f_id f_text f_date	Unique identify a feedback The content in feedback The date time when the feedback submitted	5 decimal number 1000 variable character		No No No

	curr_status	The status of the quotation when the feedback is submitted	datetime 25 variable character		No
Quotation	q_id q_date q_desc q_service q_name q_status	Unique identifier to identify quotation Date of quotation description of the quotation requested service id name of quotation quotation status	10 integer datetime 1000 variable character 10 integer 50 variable character 20 variable character		No No No No No No

2.2 Example of Data

2.2.1 Data User

Field Number	Data Type	Data Format	Field Size	Example	Description
u_id	integer	NN	10	15	Unique ID number for user
u_name	varchar		50	Nuraqilah Binti Zaidi	Name of user
u_email	varchar	db@gmail.com	50	aqilah77@gmail.com	Email of user
u_pwd	varchar		20	hjwUwo@648	Password of user
u_type	varchar	Employer/ Employee/ Customer	20	1-Employee 2 -Customer	Type of user

2.2.2 Data Employer

Field Number	Data Type	Data Format	Field Size	Example	Description
e_id	integer	NN	10	01	Unique ID number for employer

e_name	varchar		50	Fahmi Bahri	Name of employer
e_pwd	varchar		50	Test@12345	Password of employer

2.2.3 Data Feedback

Field Number	Data Type	Data Format	Field Size	Example	Description
f_id	decimal	NNNNN	5	40012	Unique identify a feedback
f_text	varchar		1000	The price was too high.	The content in feedback
f_date	date	NNNN-NN-NN		2022-01-21	Date of feedback
curr_status	varchar		25	Approved	Current status of quotation

2.2.4 Data Quotation

Field Number	Data Type	Data Format	Field Size	Example	Description
q_id	integer	NNNNNNNNNN	10	8845617892	Unique identifier to identify quotation
q_date	date	NNNN-NN-NN		2021-12-19	Date of quotation
q_desc	varchar		1000		Description of quotation
q_service	integer	NN	10	01-Air Conditioning	Requested service ID
q_name	varchar		50	Service Aircond	Quotation name
q_status	varchar		20	Pending	Quotation status

3. Section D

<< Provide the SQL statements for every database transaction requirement that are implemented for the module you are responsible in the developed system. >>

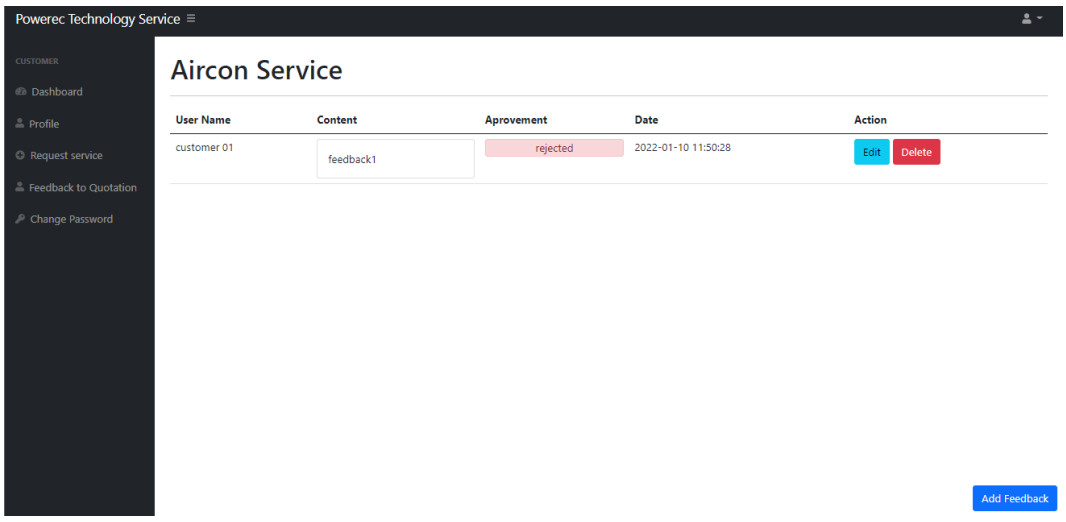
<< Provide some screenshots of results from the SQL statements as how they are being implemented and displayed in the system's GUIs. >>

```
CREATE TABLE employer (
  e_id int(11) NOT NULL,
  e_name int(11) NOT NULL,
  e_pwd varchar(50) NOT NULL
);

CREATE TABLE feedback (
  f_id int(11) NOT NULL,
  f_text text NOT NULL,
  f_date datetime NOT NULL,
  curr_status varchar(15) NOT NULL,
  u_id int(11) NOT NULL,
  q_id int(11) NOT NULL
);

CREATE TABLE quotation (
  q_id int(11) NOT NULL,
  q_date datetime NOT NULL,
  q_desc text NOT NULL,
  q_service int(11) NOT NULL,
  q_name varchar(25) NOT NULL,
  q_status varchar(15) NOT NULL
);


CREATE TABLE user (
  u_id int(11) NOT NULL,
  u_name varchar(50) NOT NULL,
  u_pwd varchar(50) NOT NULL,
  u_email varchar(25) NOT NULL,
  u_type varchar(25) NOT NULL
);

ALTER TABLE employer
  ADD PRIMARY KEY (e_id);

ALTER TABLE feedback
  ADD PRIMARY KEY (f_id),
  ADD KEY u_id (u_id,q_id),
  ADD KEY q_id (q_id);

ALTER TABLE quotation
  ADD PRIMARY KEY (q_id);
```

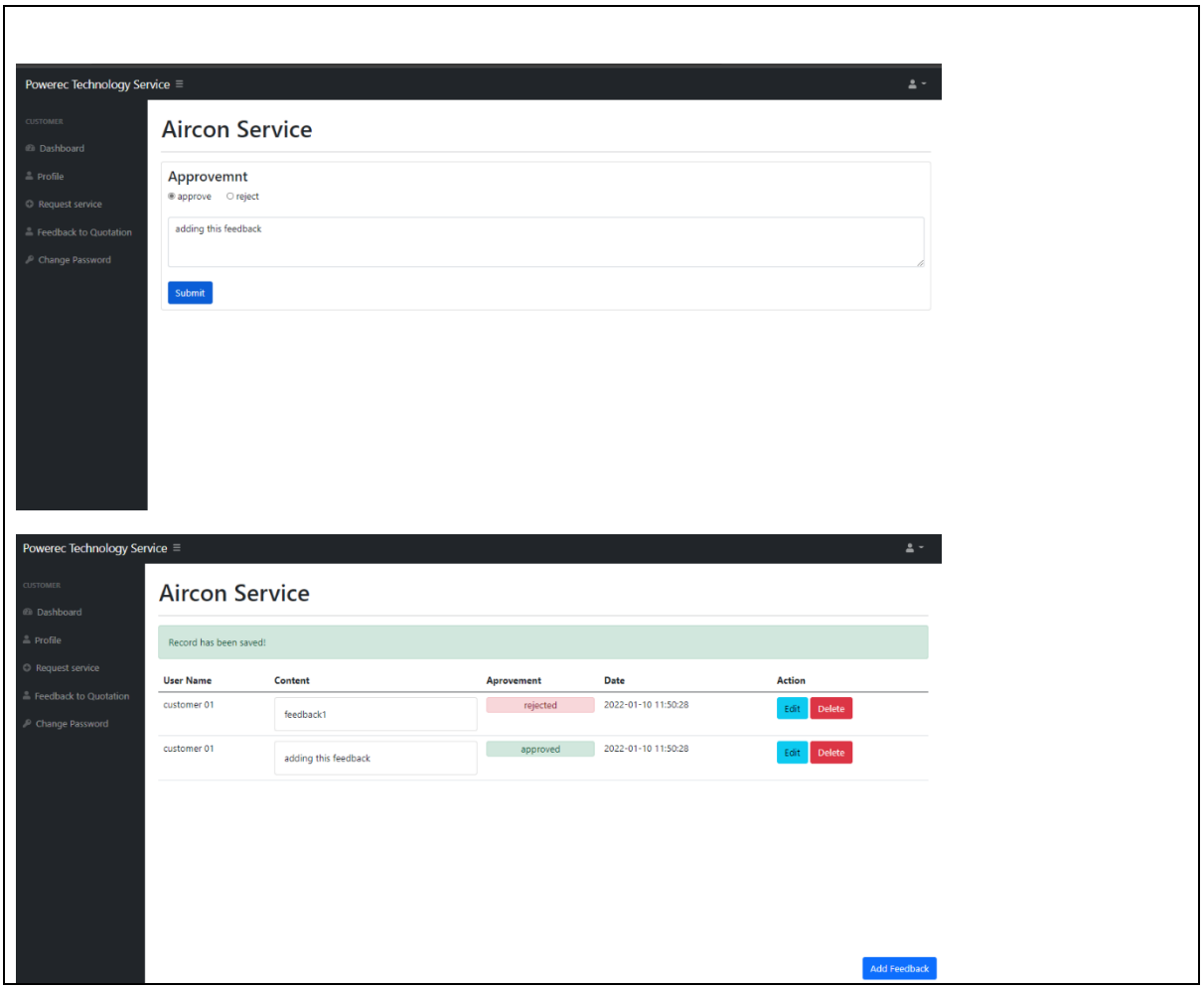
```
ALTER TABLE user
  ADD PRIMARY KEY (u_id);

ALTER TABLE feedback
  ADD CONSTRAINT feedback_ibfk_1 FOREIGN KEY (u_id)
REFERENCES user (u_id),
  ADD CONSTRAINT feedback_ibfk_2 FOREIGN KEY (q_id)
REFERENCES quotation (q_id);
```

GUI

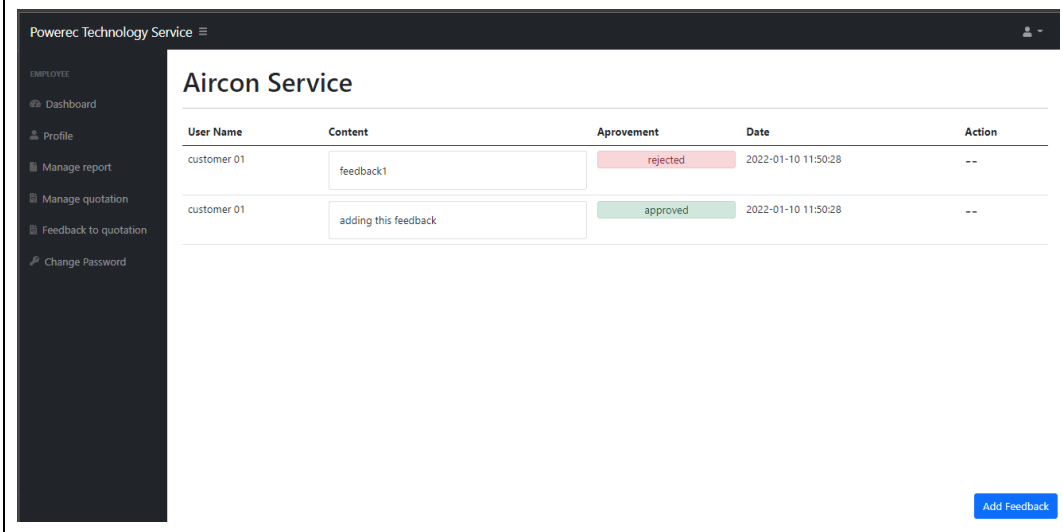
Customer read feedback



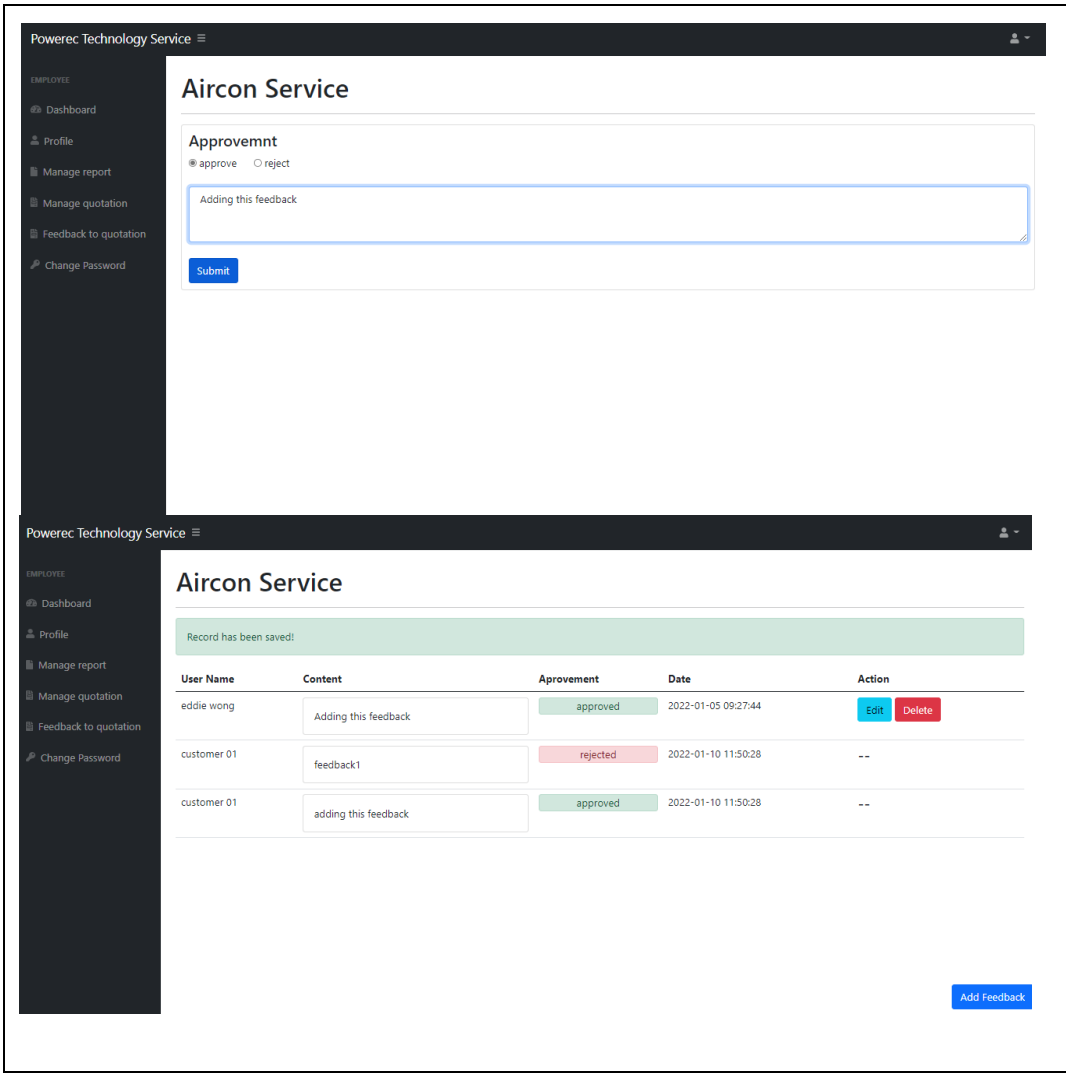
Customer create Feedback



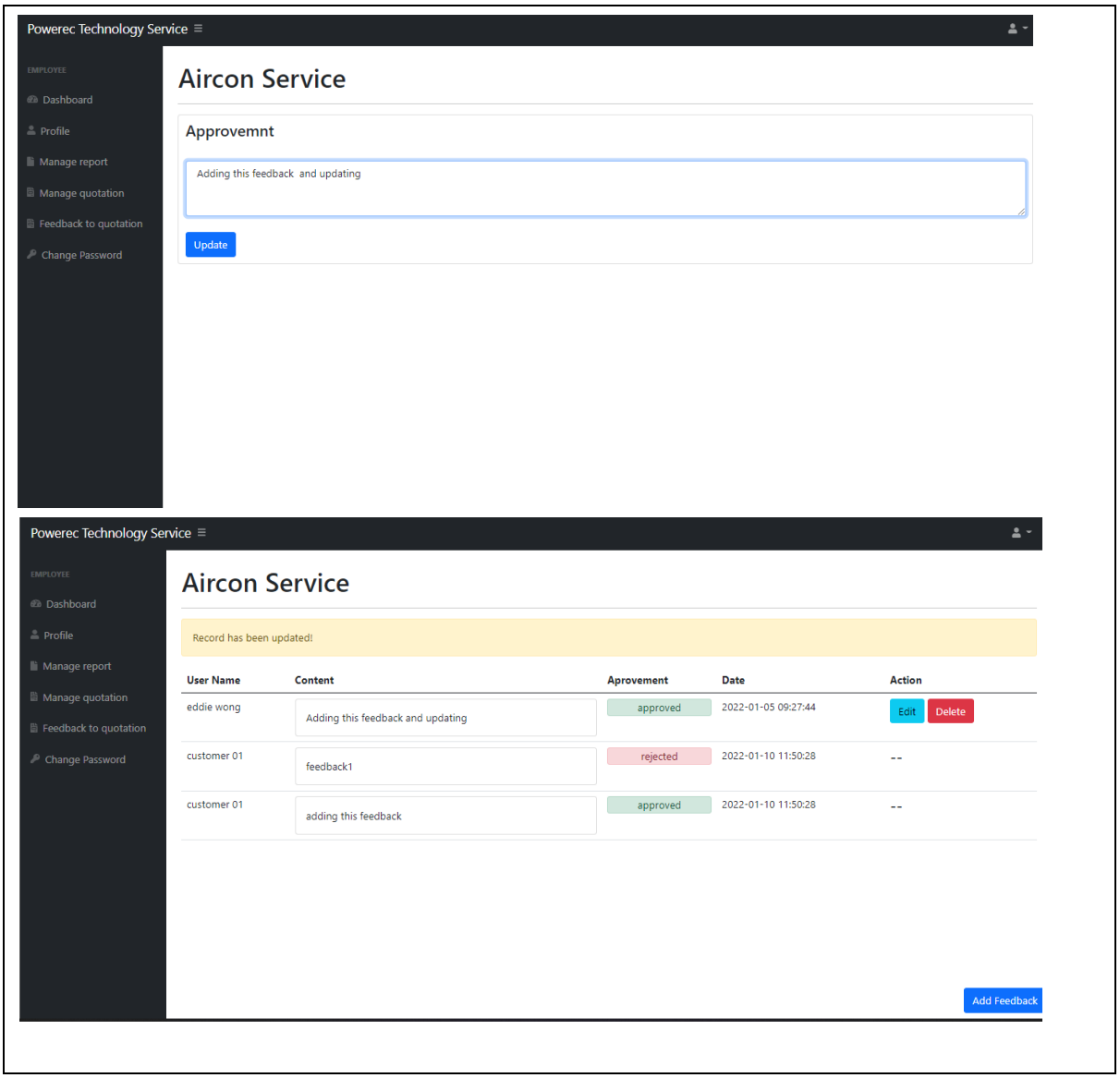
Employee & Employer read Feedback



Employee & Employer create Feedback



Employee & Employer update Feedback



Employee & Employer delete Feedback