

AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH (AIUB)

FACULTY OF SCIENCE AND TECHNOLOGY INTRODUCTION TO DATABASE

FALL 2021-2022

Section: P

REPORT TOPIC

DONATION MANAGEMENT SYSTEM.

SUPERVISED BY

ARGHO DAS

SUBMITTED BY

Name	ID	Contribution
HASAN, MD. MIRAZUL	22-46674-1	Queries
AKHI, AKLIMA AKTHER	22-46750-1	Data Insertion
AHMED, SAJID	22-46720-1	Normalization
MUNSHI, MD. NAVID	22-46956-1	Table Creation

Date of Submission: December 26, 2022

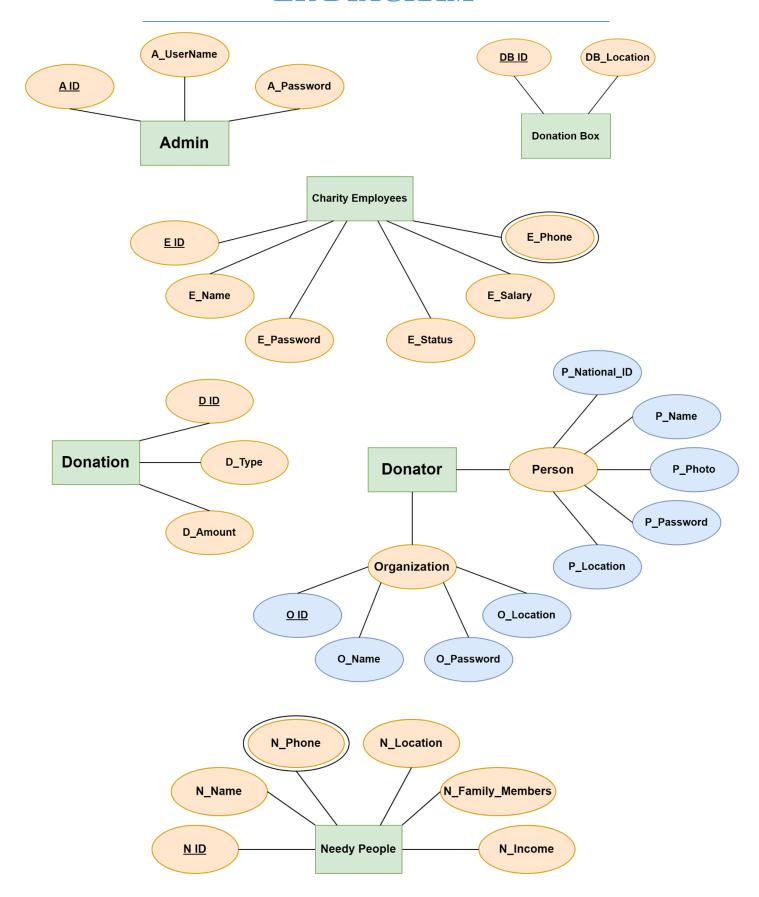
TABLE OF CONTENTS

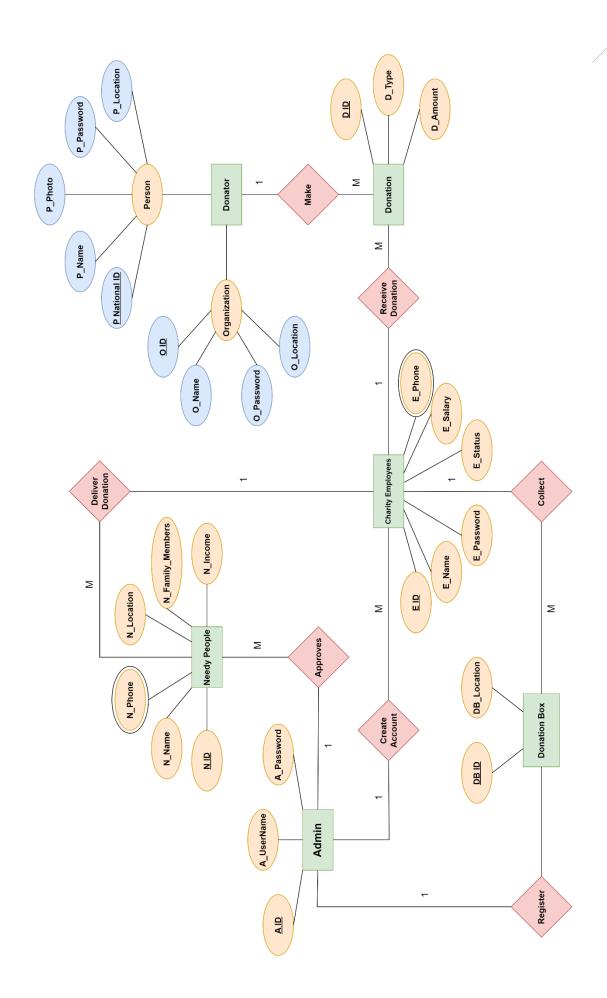
TOPICS	PAGE NO.
↓ TITLE PAGE	1
↓ TABLE OF CONTENT	2
1. INTRODUCTION	3
2. ER DIAGRAM	4 - 5
3. NORMALIZATION	6 - 13
4. CREATE TABLE	14 - 20
5. INSERT DATA	21 - 27
6. SUBQUERY	28 - 29
7. JOINING	30 - 31
8. VIEW	32
9. CONSTRAINT	33

INTRODUCTION

In a "Donation Management System", a donator donates on charity. Donator can be a person or an organization. Charity employees receive donation. A donator has P_National_ID, P_Name, P_Photo, P_Password, P_Location. A Donor Organization has O_ID, O_Name, O_Password, O_Location. Donation has D_ID, D_Type and D_Amount. Charity employee receives the donation and employees are identified by E_ID, E_Name, E_Password, E_Status, E_Salary, E_Phone. Charity employees are managed by an admin who has attributes of A_ID, A_UserName, A_Password. Admin creates accounts of the employees. Charity employees also collect donation from donation box which has attribute of DB_ID and DB_Location. Admin is also registered to the donation box. Admin approves needy people for donation. Needy people's attributes are composed of N_ID, N_Name, N_Phone, N_Location, N_Family_Members and N Income.

ER DIAGRAM





NORMALIZATION

1. Receive Donation:

UNF:

1st: <u>D_ID</u>, D_Type, D_Amount, <u>E_ID</u>, E_Name, E_Password, E_Status, E_Salary, E_Phone.

1NF:

1st: <u>D_ID</u>, D_Type, D_Amount, <u>E_ID</u>, E_Name, E_Password, E_Status, E_Salary, <u>E_Phone</u>.

(E_Phone is multivalued attribute).

2NF:

1st: <u>E_ID</u>, E_Name, E_Password, E_Status, E_Salary, Phone_ID.

2nd: D_ID, D_Type, D_Amount.

3rd: Phone_ID, Phone.

3NF:

1st: E_ID, E_Name, E_Password.

2nd: E_ID, E_Status, E_Salary, Phone_ID.

3rd: D_ID, D_Type, D_Amount.

4th: Phone_ID, Phone.

2. Make:

UNF:

1st: <u>D_ID</u>, D_Type, D_Amount, <u>O_ID</u>, O_Name, O_Password, O_Location, P_National_ID, P_Name, P_Photo, P_Password, P_Location.

1NF:

1st: <u>D_ID</u>, D_Type, D_Amount, <u>O_ID</u>, O_Name, O_Password, O_Location, P_National_ID, P_Name, P_Photo, P_Password, P_Location. (No multivalued attribute).

2NF:

1st: D_ID, D_Type, D_Amount.

2nd: O_ID, O_Name, O_Password, O_Location.

3rd: P_National_ID, P_Name, P_Photo, P_Password, P_Location.

4th: <u>D_ID</u>, O_ID, P_National_ID.

3NF:

1st: D_ID, D_Type, D_Amount.

2nd: O_ID, O_Name, O_Password.

3rd: O_ID, O_Location.

4th: P_National_ID, P_Name, P_Password.

5th: P_National_ID, P_Photo, P_Location.

6th: <u>D_ID</u>, O_ID, P_National_ID.

3. Create Account:

UNF:

1st: <u>E_ID</u>, E_Name, E_Password, E_Status, E_Salary, E_phone, A_ID, A_UserName, A_Password.

1NF:

1st: <u>E_ID</u>, E_Name, E_Password, E_Status, E_Salary, <u>E_phone</u>, A_ID, A_UserName, A_Password.

(E_phone is multivalued attribute).

2NF:

1st: A_ID, A_UserName, A_Password.

2nd: E_ID, E_Name, E_Password, E_Status, E_Salary, Phone_ID.

3rd: Phone_ID, Phone.

3NF:

1st: A_ID, A_UserName, A_Password.

2nd: E_ID, E_Name, E_Password.

3rd: E_ID, E_Status, E_Salary, Phone_ID.

4th: Phone_ID, Phone.

4. Register:

UNF:

1st: A_ID, A_UserName, A_Password, DB_ID, DB_Location.

1NF:

1st: A_ID, A_UserName, A_Password, DB_ID, DB_Location. (No multivalued attribute).

2NF:

1st: A_ID, A_UserName, A_Password.

2nd: DB_ID, DB_Location.

3NF:

1st: A_ID, A_UserName, A_Password.

2nd: DB_ID, DB_Location.

5. Collect:

UNF:

1st: E_ID, E_Name, E_Password, E_Status, E_Salary, E_Phone, DB_ID, DB_Location.

1NF:

1st: <u>E_ID</u>, E_Name, E_Password, E_Status, E_Salary, E_Phone, DB_ID, DB_Location. (E_phone is multivalued attribute).

2NF:

1st: E_ID, E_Name, E_Password.

2nd: E_ID, E_Status, E_Salary, Phone_ID

3rd: DB_ID, DB_Location.

4th: Phone_ID, Phone.

3NF:

1st: E_ID, E_Name, E_Password.

2nd: E_ID, E_Status, E_Salary, Phone_ID

3rd: DB_ID, DB_Location.

4th: Phone_ID, Phone.

6. Deliver Donation:

UNF:

1st: <u>N_ID</u>, N_Name, N_phone, N_Location, N_Family_Members, N_Income, E_ID, E_Name, E_Password, E_Status, E_Salary, E_Phone.

1NF:

1st: N_ID, N_Name, N_Phone, N_Location, N_Family_Members, N_Income, E_ID, E_Name, E_Password, E_Status, E_Salary, E_Phone.
(N_Phone & E_Phone is multivalued attribute).

2NF:

1st: N_ID, N_Name, N_Phone_ID, N_Location, N_Family_Members, N_Income.

2nd: E_ID, E_Name, E_Password, E_Status, E_Salary, Phone_ID.

3rd: Phone_ID, Phone.

4th: N_Phone_ID, N_Phone.

3NF:

1st: N_ID, N_Name, N_Phone_ID.

2nd: N_ID, N_Location, N_Family_Members, N_Income.

3rd: E_ID, E_Name, E_Password.

4th: E_ID, E_Status, E_Salary, Phone_ID.

5th: Phone_ID, Phone.

6th: N_Phone_ID, N_Phone.

7. Approve:

UNF:

1st: <u>A_ID</u>, A_UserName, A_Password, N National ID, N_Name, N_Phone, N_Location, N_Family Members, N_Income.

1NF:

1st: <u>A_ID</u>, A_UserName, A_Password, N National ID, N_Name, <u>N_Phone</u>, N_Location, N_Family_Members, N_Income. (N_Phone is multivalued attribute).

2NF:

1st: A_ID, A_UserName, A_Password.

2nd: National ID, N_Name, N_Phone_ID, N_Location, N_Family_Members, N_Income.

3rd: N_Phone_ID, N_Phone.

3NF:

1st: N_ID, N_Name, N_Phone_ID.

2nd: N_ID, N_Location, N_Family_Members, N_Income.

3rd: A_ID, A_UserName, A_Password.

4th: N_Phone_ID, N_Phone.

FINAL TABLE:

- 01st: E_ID, E_Name, E_Password.
- 02nd: E_ID, E_Status, E_Salary, Phone_ID.
- 03rd: Phone_ID, Phone.
- 04th: A_ID, A_UserName, A_Password.
- 05th: D_ID, D_Type, D_Amount.
- 06th: D_ID, O_ID, P_National_ID.
- 07th: O_ID, O_Name, O_Password.
- 08th: O_ID, O_Location.
- 09th: N_ID, N_Name, N_Phone_ID.
- 10th: N_ID, N_Location, N_Family_Members, N_Income.
- 11th: N Phone ID, N Phone.
- 12th: P_National_ID, P_Name, P_Password.
- 13th: P_National_ID, P_Photo, P_Location.
- 14th: DB_ID, DB_Location.

CREATE TABLE

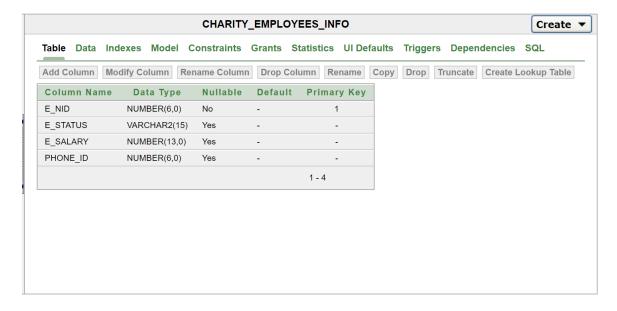
1. CHARITY_EMPLOYEES_ID:

CREATE TABLE CHARITY_EMPLOYEES_ID(E_ID NUMBER(6,0) NOT NULL, E_NAME VARCHAR2(30), E_PASSWORD NUMBER(13,0), CONSTRAINT CHARITY_EMPLOYEES_ID_PK PRIMARY KEY(E_ID));



2. CHARITY EMPLOYEES INFO:

CREATE TABLE CHARITY_EMPLOYEES_INFO(E_ID NUMBER(6,0) NOT NULL, E_STATUS VARCHAR2(15), E_SALARY NUMBER(13,0), PHONE_ID NUMBER(6,0), CONSTRAINT CHARITY_EMPLOYEES_INFO_PK PRIMARY KEY(E_ID));



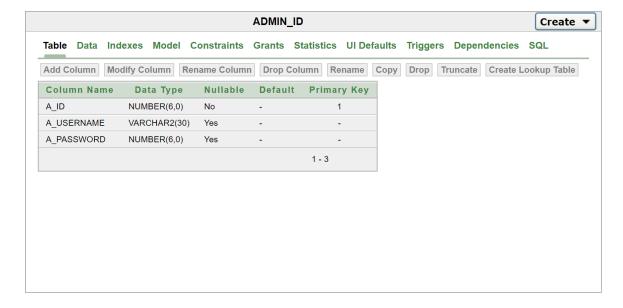
3. CHARITY_EMPLOYEES_PHONE:

CREATE TABLE CHARITY_EMPLOYEES_PHONE (PHONE_ID NUMBER(6,0) NOT NULL, PHONE NUMBER(12,0), CONSTRAINT CHARITY_EMPLOYEES_PHONE_PK PRIMARY KEY(PHONE_ID));



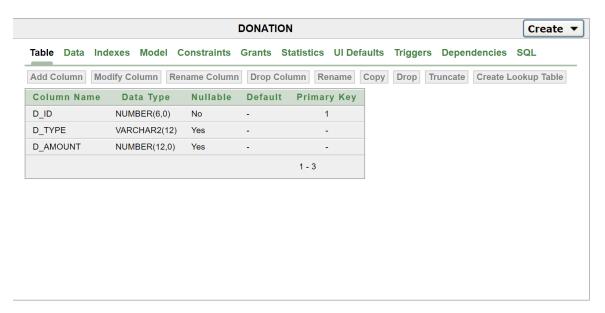
4. ADMIN ID:

CREATE TABLE ADMIN_ID (A_ID NUMBER(6,0) NOT NULL, A_USERNAME VARCHAR2(30), A_PASSWORD NUMBER(6,0), CONSTRAINT ADMIN_ID_PK PRIMARY KEY(A_ID));



5. DONATION:

CREATE TABLE DONATION (D_ID NUMBER(6,0) NOT NULL, D_TYPE VARCHAR2(12), D_AMOUNT NUMBER(12,0), CONSTRAINT DONATION_PK PRIMARY KEY(D_ID));



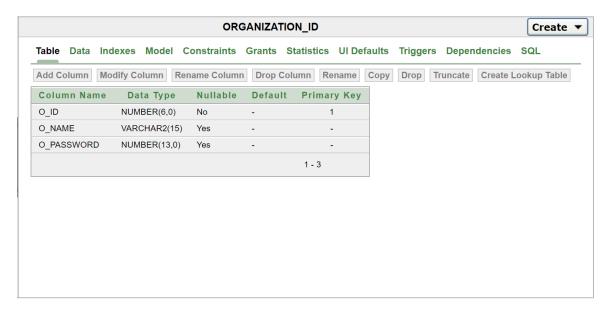
6. **DONATION_ID**:

CREATE TABLE DONATION_ID (D_ID NUMBER(6,0) NOT NULL, O_ID Number(6,0), P_National_ID NUMBER(20,0), CONSTRAINT DONATION_ID_PK PRIMARY KEY(D_ID));



7. ORGANIZATION_ID:

CREATE TABLE ORGANIZATION_ID (O_ID NUMBER(6,0) NOT NULL, O_NAME VARCHAR2(15), O_PASSWORD NUMBER(13,0), CONSTRAINT ORGANIZATION_ID_PK PRIMARY KEY(O_ID));



8. ORGANIZATION_LOCCATION:

CREATE TABLE ORGANIZATION_LOCCATION (O_ID NUMBER(6,0) NOT NULL, O_LOCATION VARCHAR2(50), CONSTRAINT ORGANIZATION_LOCCATION_PK PRIMARY KEY(O_ID));



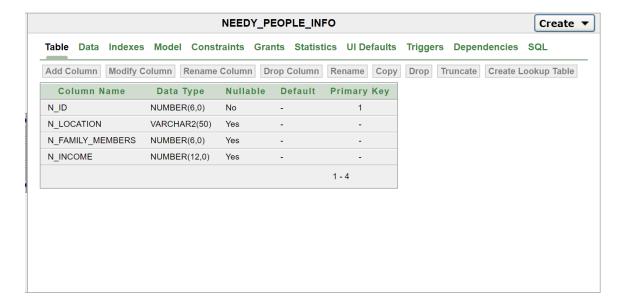
9. NEEDY_PEOPLE_ID:

CREATE TABLE NEEDY_PEOPLE_ID (N_ID NUMBER(6,0) NOT NULL, N_NAME VARCHAR2(15), N_PHONE_ID NUMBER(13,0), CONSTRAINT NEEDY_PEOPLE_ID_PK PRIMARY KEY(N_ID));



10. NEEDY_PEOPLE_INFO:

CREATE TABLE NEEDY_PEOPLE_INFO (N_ID NUMBER(6,0) NOT NULL, N_LOCATION VARCHAR2(50), N_FAMILY_MEMBERS NUMBER(6,0), N_INCOME NUMBER(12,0), CONSTRAINT NEEDY_PEOPLE_INFO_PK PRIMARY KEY(N_ID));



11. NEEDY_PEOPLE_PHONE:

CREATE TABLE NEEDY_PEOPLE_PHONE (N_PHONE_ID NUMBER(6,0) NOT NULL, N_PHONE NUMBER(12,0), CONSTRAINT NEEDY_PEOPLE_PHONE_PK PRIMARY KEY(N_PHONE_ID));



12. PERSON ID:

CREATE TABLE PERSON_ID (P_NATIONAL_ID NUMBER(20,0) NOT NULL, P_NAME VARCHAR2(15), P_PASSWORD NUMBER(13,0), CONSTRAINT PERSON_ID_PK PRIMARY KEY(P_NATIONAL_ID));



13. PERSON_INFO:

CREATE TABLE PERSON_INFO (P_NATIONAL_ID NUMBER(20,0) NOT NULL, P_PHOTO VARCHAR2(15), P_LOCATION VARCHAR2(50), CONSTRAINT PERSON_INFO_PK PRIMARY KEY(P_NATIONAL_ID));



14. DONATION_BOX:

CREATE TABLE DONATION_BOX (DB_ID NUMBER(20,0) NOT NULL, DB_LOCATION VARCHAR2(50), CONSTRAINT DONATION_BOX_PK PRIMARY KEY(DB_ID));



INSERT DATA

1. CHARITY_EMPLOYEES_ID:

Insert into CHARITY_EMPLOYEES_ID values(01, 'MAHFUZUL HAQUE', 171100); Insert into CHARITY_EMPLOYEES_ID values(02, 'SHAFQAT SHAMIM', 130700);



2. CHARITY EMPLOYEES INFO:

Insert into CHARITY_EMPLOYEES_INFO values(1, 'MANAGER', 171100, 01); Insert into CHARITY_EMPLOYEES_INFO values(2, 'DISTRIBUTION', 130700, 02);



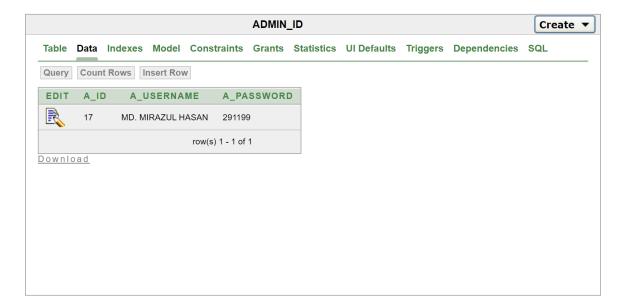
3. CHARITY_EMPLOYEES_PHONE:

Insert into CHARITY_EMPLOYEES_PHONE values(1, 01647206843); Insert into CHARITY_EMPLOYEES_PHONE values(2, 01862512542);



4. CHARITY_ADMIN_ID:

Insert into CHARITY_ADMIN_ID values(17, 'MIRAZUL HASAN', 291199);



5. DONATION:

Insert into DONATION values(1, 'SELF', 17100); Insert into DONATION values(2, 'FREE HAND', 1307);



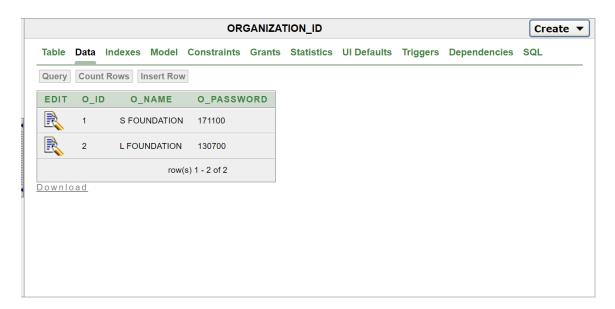
6. DONATION_ID:

Insert into DONATION_ID values(1, 1, 17684595); Insert into DONATION_ID values(2, 2, 19558062);



7. ORGANIZATION_ID:

Insert into ORGANIZATION_ID values(1, 'S FOUNDATION', 171100); Insert into ORGANIZATION_ID values(2, 'L FOUNDATION', 130700);



8. ORGANIZATION_LOCCATION:

Insert into ORGANIZATION_LOCCATION values(1, 'DHAKA'); Insert into ORGANIZATION_LOCCATION values(2, 'BOGURA');



9. NEEDY_PEOPLE_ID:

Insert into NEEDY_PEOPLE_ID values(1, 'HALIMA', 1); Insert into NEEDY_PEOPLE_ID values(2, 'ABUL', 2);



10. NEEDY_PEOPLE_INFO:

Insert into NEEDY_PEOPLE_INFO values(1, 'RAJSHAHI', 5, 5000); Insert into NEEDY_PEOPLE_INFO values(2, 'FARIDPUR', 7, 10000);



11. NEEDY_PEOPLE_PHONE:

Insert into NEEDY_PEOPLE_PHONE values(1, 017684595); Insert into NEEDY_PEOPLE_PHONE values(2, 019558062);



12. PERSON_ID:

Insert into PERSON_ID values(017684595, 'ROKEY', 548453); Insert into PERSON_ID values(019558062, 'RAHI', 544684);



13. PERSON_INFO:

Insert into PERSON_INFO values(17684595, 'SELFIE', 'KUSTIYA'); Insert into PERSON_INFO values(19558062, 'SELFIE', 'NATORE');



14. DONATION_BOX:

Insert into DONATION_BOX values(01001, 'DHAKA'); Insert into DONATION_BOX values(01002, 'RAJSHAHI');



SUBQUERY

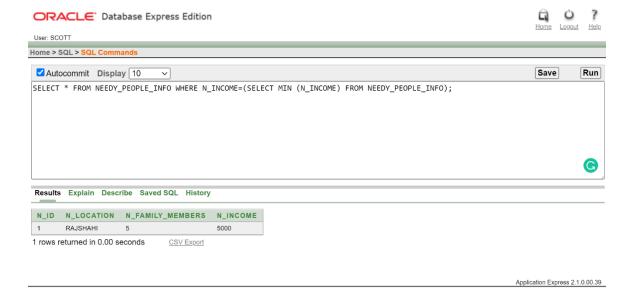
1. Show all details of the maximum Donator Organization.

SELECT * FROM ORGANIZATION_ID , DONATION WHERE D_AMOUNT=(SELECT MAX (D_AMOUNT) FROM DONATION) AND DONATION.D_ID=ORGANIZATION_ID.O_ID;



2. Show all details of the lowest income people in needy people table.

SELECT * FROM NEEDY_PEOPLE_INFO WHERE N_INCOME=(SELECT MIN (N_INCOME) FROM NEEDY_PEOPLE_INFO);



3. Display all employee names whose has more or equal than 171100 salaries.

SELECT * FROM CHARITY_EMPLOYEES_INFO WHERE E_ID IN (SELECT E_ID FROM CHARITY_EMPLOYEES_INFO WHERE E_SALARY >= 171100);



JOINING

1. Find out donator name who has donated 17100.

SELECT P_NAME FROM PERSON_ID, DONATION, DONATION_ID WHERE DONATION.D_ID= DONATION_ID. D_ID AND PERSON_ID.P_NATIONAL_ID= DONATION_ID.P_NATIONAL_ID AND D_AMOUNT=17100;



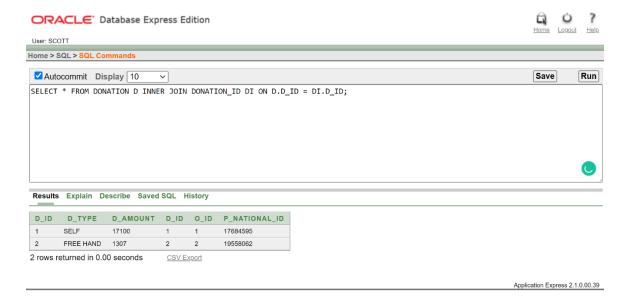
2. Display all details of needy people when income between 3500 and 10000 live but out of Sylhet.

SELECT * FROM NEEDY_PEOPLE_INFO WHERE N_INCOME BETWEEN 3500 AND 7000 AND NEEDY_PEOPLE_INFO.N_LOCATION<> 'SYLHET';



3. Display all info for those who have donated.

SELECT * FROM DONATION D INNER JOIN DONATION_ID DI ON D.D_ID = DI.D_ID;

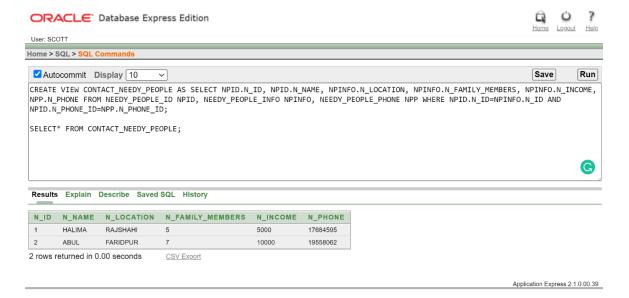


VIEW

1. Creating a view named CONTACT_NEEDY_PEOPLE.

CONTACT_NEEDY_PEOPLE AS SELECT NPID.N_ID, CREATE VIEW NPID.N NAME, NPINFO.N LOCATION, NPINFO.N_FAMILY_MEMBERS, NEEDY_PEOPLE_ID NPINFO.N_INCOME, NPP.N_PHONE FROM NPID, NPINFO, NEEDY PEOPLE PHONE NEEDY PEOPLE INFO NPP WHERE NPID.N_ID=NPINFO.N_ID AND NPID.N_PHONE_ID=NPP.N_PHONE_ID;

SELECT* FROM CONTACT_NEEDY_PEOPLE;



CONSTRAINT

1. Adding PRIMARY KEY.

ALTER TABLE DONATION ADD PRIMARY KEY(D_ID);

