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ITE1003 - Database Management Systems

Project Report

Project Title

Income Tax Management System

Slot : G1

Team Members:

Dhruv Umesh Sompura-20BIT0357

Ishan Rajesh Kasat - 20BIT0391

Samyuktha S - 20BIT0421

Submitted to : Tapan Kumar Das

Acknowledgement

We take this opportunity to express our profound gratitude and deep regards to our project guide Prof. Tapan Kumar Das for his exemplary guidance, monitoring and constant encouragement throughout the course of this subject ITE1003: Database Management Systems that helped us to complete this project . The blessing, help and guidance given by him time to time shall carry us a long way in the journey of life on which we are about to embark. We also take this opportunity to express a deep sense of gratitude to the management of VIT UNIVERSITY for their cordial support, valuable information and guidance, which helped us in completing this task through various stages. Lastly, we thank the almighty, our parents, brothers, sisters and friends for their constant encouragement without which this project would not be possible.

Contents

Abstract

A tax is a mandatory fee or financial charge levied by any government on an individual or an organization to collect revenue for public works providing the best facilities and infrastructure. The collected fund is then used to fund different public expenditure programs. Prompt tax payment and decreased tax evasion is always a primary objective of the government authorities in maximum civilizations that exist nowadays. The problem of tax evasion has demonstrated to be a tough exercise to curb even in countries with a proper database of its citizenry and the current mode of tax fee is redundant and also demanding. It mainly occurs due to the present taxation system present in our country which is not accessible by the clients easily and also don't have a proper database. Some of the challenges governmental bodies have to overcome in order to encourage the prompt payment of taxes and effectively reduce evasion includes, developing convenient payment methods and having proper records keeping systems.

The purpose of this project is to create a database for Income Tax Return System and connect it to a website so that real time updating and transactions on database can be handled.

Introduction

The objectives to be achieved by the system are instant access, improved productivity through efficient utilization of resources, database creation and records management, simplification of operations, reduced processing time, user friendliness, portability and flexibility for further enhancement. In Tax Information system, a client registers himself enters all the details and uploads various Documents that are necessary for preparation of Tax Summary and Schedules for an interview after successful submission of all the documents. After all the procedures are completed Tax Returns or Tax summary is prepared for all the clients by the admin who calls the clients and arranges an interview for discussing various issues regarding Tax summary .Once the client pays the amount for preparation of Tax Summary he can download the PDF format of his Tax Summary.

Project Scope

The main aim of this project is to prepare a Tax summary or Tax Returns system. In income tax returns system, a client registers himself then enters all the details and uploads various Documents that are very necessary for preparation of Tax Summary.

Project Resource Requirement

Front-end:

- HTML
- CSS
- JavaScript

Back-end:

- SQL Plus
- PHP

Entities

1. Registration
2. Login
3. MyProfile
4. Document
5. Schedule
6. Payment
7. Bank

Attributes

1. **Registration**

    - taxid
    - name (Composite Attr) – fname, mname, lname
    - user id
    - password
    - phone

2. **Login**

    - user id
    - password

3. **MyProfile**

    - Taxid
    - name (Composite Attr) – fname, mname, lname
    - Gender
    - DOB
    - Address
    - City
    - Doc_id

4. **Document**

    - doc_id
    - doc_type
    - status (Multivalued Attr) – Accepted or Rejected

5. **Schedule**

    - taxid
    - skd_date
    - status_confirmation

6. **Payment**

- CIN
- taxid
- bank
- Acc_no
- amount
- Pay_date

7. **Bank Acc**

- Bank
- Acc_no
- Acc_type
- BIFSC
- Taxid

Relations

a) My Profile does Login

b) Login does Registration

c) My Profile uploads Document

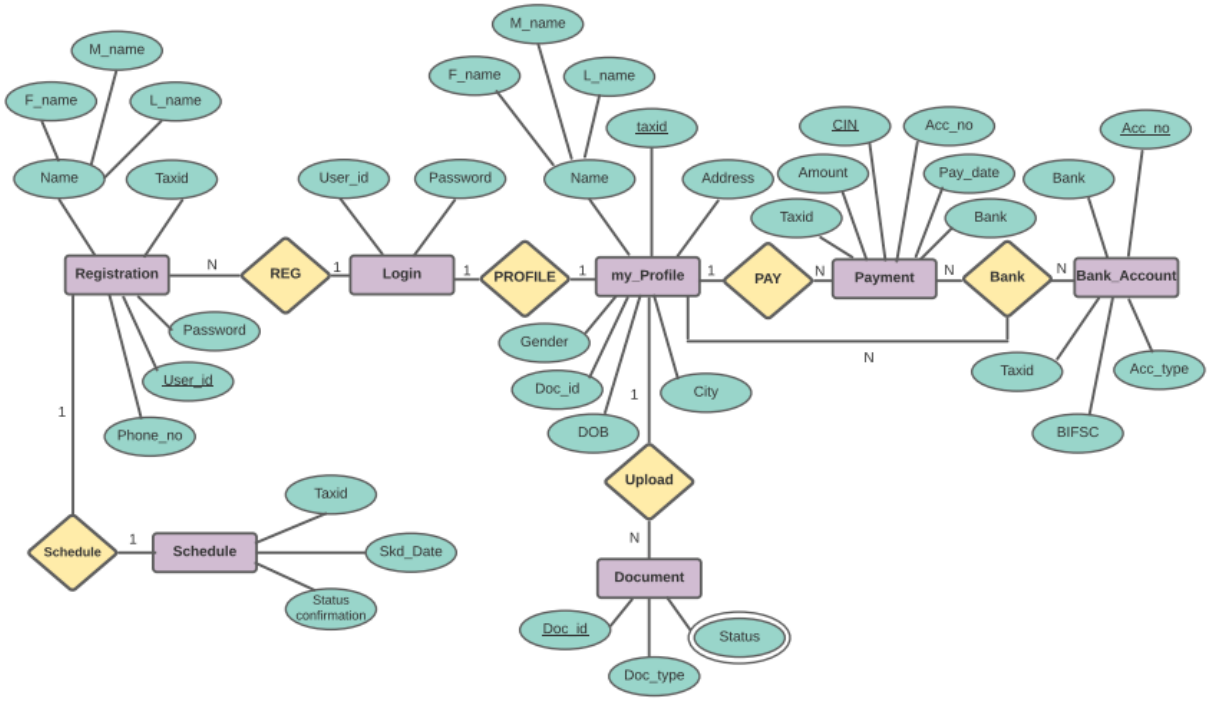
d) My Profile holds Bank Acc

e) My Profile pays Payment

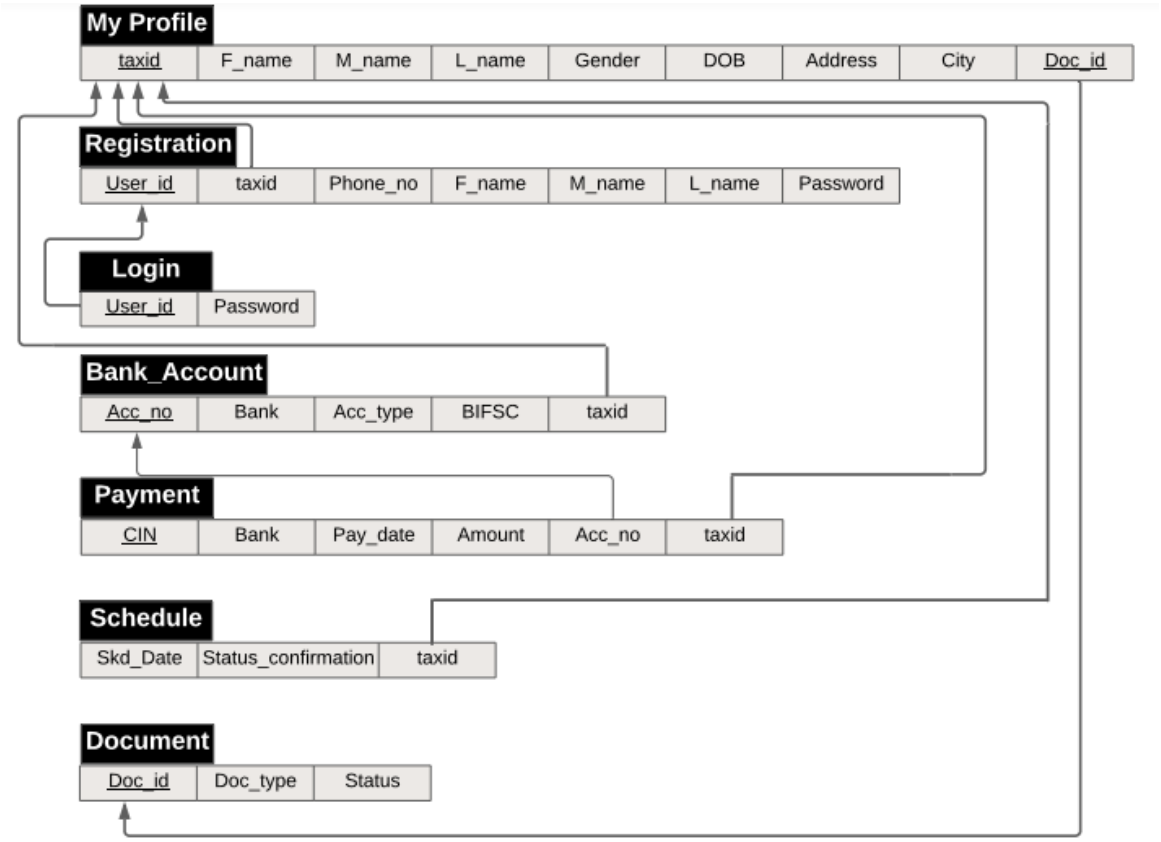
f) Payment through Bank Acc

g) Schedule of Registration

ER Diagram



Relational Schema Diagram



ENTITY SET 1: MYPROFILE

Taxid	DOB	Gender	Address	City	Fname	Mname	Lname	Docid

Minimal Cover

taxid => fname

dob => fname

address => city

address => gender

fname => lname

fname => dob

fname => address

fname => taxid

docid => fname

city => address

city => mname

Checking present normal form

The table is in 2NF but violates 3NF and therefore not in BCNF

2NF

find all candidate keys. The candiates keys are { docid}, The set of key attributes are: { docid }

for each non-trivial FD, check whether the LHS is a proper subset of some candidate key or the RHS are not all key attributes

checking FD: taxid --> dob,gender,address,city,fname,mname,lname checking FD: dob --> gender,taxid,address,city,fname,mname,lname checking FD: address --> city,mname,gender

checking FD: fname --> mname,lname,city,dob,address,gender,taxid checking FD: docid --> taxid,dob,gender,city,address,fname,mname,lname checking FD: city --> address,mname

3NF

find all cadnidate keys. The candiates keys are { docid}, The set of key attributes are: { docid } for each FD, check whether the LHS is superkey or the RHS are all key attributes

checking functional dependency taxid --> dob,gender,address,city,fname,mname,lname

The above FD violates definition of 3NF: it is non-trivial, LHS is not superkey, RHS contains a non- key attribute.

BCNF

A table is in BCNF if and only if for every non-trivial FD, the LHS is a superkey.

The FD taxid --> dob,gender,address,city,fname,mname,lname is non-trivial and its LHS is not a superkey. It violates BCNF.

Convert to BCNF

Step 1. Find merged minimal cover of FDs, which contains:

taxid --> fname

dob --> fname

address --> city,gender

fname --> lname,dob,address,taxid

docid --> fname

city --> address,mname

Initially rel[1] contains the original table, with the FDs above

Round1: Checking whether table rel[1] is in BCNF

The FD [taxid --> fname] violates BCNF as the LHS is not superkey. Table is split into the two below: rel[2]=
(taxid,fname,lname,dob,address,city,gender,mname)

rel[3]= (taxid,docid)

Round2: Checking whether table rel[2] is in BCNF

The FD [address --> city] violates BCNF as the LHS is not superkey. Table is split into the two below: rel[4]= (address,city,gender,mname)

rel[5]= (taxid,fname,lname,dob,address)

Round3: Checking whether table rel[3] is in BCNF

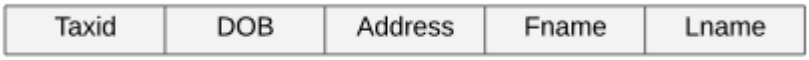
*** Table rel[3] is in BCNF already, send it to output ***

Round4: Checking whether table rel[4] is in BCNF

*** Table rel[4] is in BCNF already, send it to output ***

Round5: Checking whether table rel[5] is in BCNF

*** Table rel[5] is in BCNF already, send it to output ***



ENTITY SET 2: DOCUMENT

Docid	doctype	Satuts

Minimal Cover

docid =>status
docid => doctype

Candidate Keys

docid

Checking present normal form

The table is in 2NF,3NF and BCNF

2NF

find all candidate keys. The candidate keys are { docid}, The set of key attributes are: { docid }

for each non-trivial FD, check whether the LHS is a proper subset of some candidate key or the RHS are not all key attributes

checking FD: docid --> status,doctype

3NF

find all cadnidate keys. The candiates keys are { docid}, The set of key attributes are: { docid } for each FD, check whether the LHS is superkey or the RHS are all key attributes

checking functional dependency docid --> status,doctype

BCNF

A table is in BCNF if and only if for every non-trivial FD, the LHS is a superkey.

ENTITY SET 3: TAX REGISTRATION

Taxid	Phone	Userid	Fname	Mname	Lname	password

Minimal Cover

taxid => lname

phone => lname

userid => lname

fname => lname

lname => taxid

lname => phone

lname => userid

lname => fname

lname => pwd

pwd => mname

Candidate Keys

- taxid
- phone
- userid
- fname
- lname

Checking current normal form

Table is 1NF, 2NF but not in 3NF and BCNF

2NF

find all candidate keys. The candidates keys are { taxid}, { phone}, { userid}, { fname}, { lname}, The set of key attributes are: { taxid,phone,userid,fname,lname }

for each non-trivial FD, check whether the LHS is a proper subset of some candidate key or the RHS are not all key attributes

checking FD: taxid --> phone,userid,fname,mname,lname,pwd

checking FD: phone --> taxid,userid,fname,mname,lname,pwd

checking FD: userid --> taxid,phone,fname,mname,lname,pwd

checking FD: fname --> taxid,phone,userid,mname,lname,pwd

checking FD: lname --> taxid,phone,userid,fname,mname,pwd

checking FD: pwd --> mname

3NF

find all candidate keys. The candidates keys are { taxid}, { phone}, { userid}, { fname}, { lname}, The set of key attributes are: { taxid,phone,userid,fname,lname }

for each FD, check whether the LHS is superkey or the RHS are all key attributes

checking functional dependency taxid --> phone,userid,fname,mname,lname,pwd

checking functional dependency phone --> taxid,userid,fname,mname,lname,pwd

checking functional dependency userid --> taxid,phone,fname,mname,lname,pwd

checking functional dependency fname --> taxid,phone,userid,mname,lname,pwd

checking functional dependency lname -->

taxid,phone,userid,fname,mname,pwd

checking functional dependency pwd --> mname

The above FD violates definition of 3NF: it is non-trivial, LHS is not superkey, RHS contains a non-key attribute.

BCNF

A table is in BCNF if and only if for every non-trivial FD, the LHS is a superkey.

The FD pwd --> mname is non-trivial and its LHS is not a superkey. It violates BCNF.

STEPS TO NORMALIZE:

Step 1. Find merged minimal cover of FDs, which contains:

taxid --> lname

phone --> lname

userid --> lname

fname --> lname

lname --> taxid,phone,userid,fname,pwd

pwd --> mname

Initially relation[1] contains the original table, with the FDs above

Round1: Checking whether table relation[1] is in BCNF

The FD [pwd --> mname] violates BCNF as the LHS is not superkey. Table is split into the two below: relation[2]= (pwd,mname)

relation[3]= (taxid,phone,userid,fname,lname,pwd)

Round2: Checking whether table rel[2] is in BCNF

*** Table rel[2] is in BCNF already, send it to output ***

Round3: Checking whether table rel[3] is in BCNF

*** Table rel[3] is in BCNF already, send it to output ***

mname	password

Taxid	Phone	Userid	Fname	Lname	password

ENTITY SET 4: PAYMENT

bankname	date	Amount	CIN	Account_Number	Taxid

Minimal Cover

date => amount

cin => taxid

account_number => taxid

taxid => bankname

taxid => date

taxid => cin

taxid => account_number

bankname => amount

Candidate keys

- cin
- account_number
- taxid

Check present normal Form

This relation is in 2NF but it violates 3NF and therefore BCNF.

2NF

find all candidate keys. The candidates keys are { cin}, { account_number}, { taxid}, The set of key attributes are: { cin , account_number, taxid }

for each non-trivial FD, check whether the LHS is a proper subset of some candidate key or the RHS are not all key attributes

checking FD: cin --> bankname,date,amount,account_number,taxid

checking FD: account_number --> bankname,date,amount,cin,taxid

checking FD: taxid --> bankname,date,amount,cin,account_number

checking FD: bankname --> amount

checking FD: date --> amount

3NF

find all candidate keys. The candiates keys are { cin}, { account_number}, { taxid}, The set of key attributes are: { cin,account_number,taxid }

for each FD, check whether the LHS is superkey or the RHS are all key attributes

checking functional dependency cin --> bankname,date,amount,account_number,taxid

checking functional dependency account_number --> bankname,date,amount,cin,taxid

checking functional dependency taxid --> bankname,date,amount,cin,account_number

checking functional dependency bankname --> amount

The above FD violates definition of 3NF: it is non-trivial, LHS is not superkey, RHS contains a non- key attribute.

BCNF

A table is in BCNF if and only if for every non-trivial FD, the LHS is a superkey.

The FD bankname --> amount is non-trivial and its LHS is not a superkey. It violates BCNF.

Converting to BCNF

Step 1. Find merged minimal cover of FDs, which contains:

cin --> taxid account_number --> taxid

taxid --> bankname,date,cin,account_number bankname --> amount

date --> amount

Initially rel[1] contains the original table, with the FDs above

Round1: Checking whether table rel[1] is in BCNF

The FD [bankname --> amount] violates BCNF as the LHS is not superkey.
Table is split into the two below:

rel[2]= (bankname,amount)

rel[3]= (bankname,date,cin,account_number,taxid)

Round2: Checking whether table rel[2] is in BCNF

*** Table rel[2] is in BCNF already, send it to output ***

Round3: Checking whether table rel[3] is in BCNF

*** Table rel[3] is in BCNF already, send it to output ***

bankname	amount

bankname	date	CIN	Account_Number	Taxid

ENTITY SET 5 : SCHEDULE

Taxid	Status_confimation	skd_date

Minimal cover

tax_id =>skd_date

sdate => tax_id

skd_date=>status_confirmation

Candidate key

- tax_id
- sdate

Check Present Normal Form

The table is 2NF , 3NF and BCNF

2NF

find all candidate keys. The candiates keys are { tax_id}, { sdate}, The set of key attributes are: { tax_id,sdate }

for each non-trivial FD, check whether the LHS is a proper subset of some candidate key or the RHS are not all key attributes

checking FD: tax_id□status_confirmation,skd_date

checking FD: skd_date->tax_id,status_confirmation

3NF

find all cadnidate keys. The candiates keys are { tax_id}, { skd_date}, The set of key attributes are: { tax_id,skd_date }

for each FD, check whether the LHS is superkey or the RHS are all key attributes checking functional dependency tax_id --> status_confirmation,skd_date

checking functional dependency skd_date --> tax_id,status_confirmation

BCNF

A table is in BCNF if and only if for every non-trivial FD, the LHS is a superkey.

ENTITY SET 6: BANK ACCOUNT

Account_Number	Bankname	BIFS code	Account_type

Minimal Cover

accountnumber => bankname

bankname => BIFScode

BIFScode => Account_Type

Candidate Keys

accountnumber

Checking Present Normal Form

This Relation is in 2NF, but it violates 3NF and BCNF

2NF

find all candidate keys. The candiates keys are { accountnumber}, The set of key attributes are: { accountnumber }

for each non-trivial FD, check whether the LHS is a proper subset of some candidate key or the RHS are not all key attributes

checking FD: accountnumber --> bankname checking FD: bankname --> BIFScode checking FD: BIFScode --> Type

3NF

find all cadnidate keys. The candiates keys are { accountnumber}, The set of key attributes are: { accountnumber }

for each FD, check whether the LHS is superkey or the RHS are all key attributes checking functional dependency accountnumber --> bankname

checking functional dependency bankname --> BIFScode

The above FD violates definition of 3NF: it is non-trivial, LHS is not superkey, RHS contains a non- key attribute.

BCNF

A table is in BCNF if and only if for every non-trivial FD, the LHS is a superkey.

The FD bankname --> BIFScode is non-trivial and its LHS is not a superkey. It violates BCNF.

Convert to BCNF

Step 1. Find merged minimal cover of FDs, which contains:

accountnumber --> bankname bankname --> BIFScode BIFScode --> Type

Initially rel[1] contains the original table, with the FDs above

Round1: Checking whether table rel[1] is in BCNF

The FD [bankname --> BIFScode] violates BCNF as the LHS is not superkey. Table is split into the two below:

rel[2]= (bankname,BIFScode,Type) rel[3]= (accountnumber,bankname)

Round2: Checking whether table rel[2] is in BCNF

The FD [BIFScode --> Type] violates BCNF as the LHS is not superkey. Table is split into the two below:

rel[4]= (BIFScode,Type) rel[5]= (bankname,BIFScode)

Round3: Checking whether table rel[3] is in BCNF

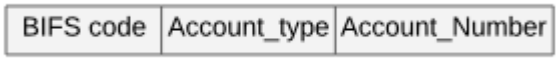
*** Table rel[3] is in BCNF already, send it to output ***

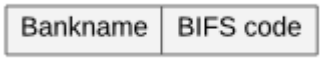
Round4: Checking whether table rel[4] is in BCNF

*** Table rel[4] is in BCNF already, send it to output ***

Round5: Checking whether table rel[5] is in BCNF

*** Table rel[5] is in BCNF already, send it to output ***





Database

Table Names

- my_Profile
- Registration
- Login
- Bank_Account
- Payment
- Schedule
- Document

Creating Tables

my_Profile

```
SQL> create table my_Profile(taxid NUMBER(15), Fname VARCHAR(10), Mname VARCHAR(10), Lname VARCHAR(10), Gender CHAR(5), DOB DATE, Address VARCHAR(20), City VARCHAR(15), Docid REFERENCES Document(Doc_id), PRIMARY
 KEY(taxid, Docid));
```

Registration

```
SQL> create table Registration(User_id NUMBER(10) PRIMARY KEY, taxid REFERENCES my_Profile(taxid), Phone_no NUMBER(10), Fname VARCHAR(10), Mname VARCHAR(10), Lname VARCHAR(10), Password VARCHAR(10));
Table created.
```

Login

```
SQL> create table Login(User_id REFERENCES Registration(User_id), Password VARCHAR(10));

Table created.
```

Bank_Account

```
SQL> create table Bank_Account(Acc_no NUMBER(15) PRIMARY KEY, Bank VARCHAR(20), Acc_type VARCHAR(15), BIFSC VARCHAR(15), taxid REFERENCES my_Profile(taxid));

Table created.

SQL> desc bank_account;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 ACC_NO                                    NOT NULL NUMBER(15)
 BANK                                               VARCHAR2(20)
 ACC_TYPE                                           VARCHAR2(15)
 BIFSC                                              VARCHAR2(15)
 TAXID                                              NUMBER(15)
```

Payment

```
SQL> create table Payment(CIN NUMBER(15) PRIMARY KEY, Bank VARCHAR(20), Pay_date DATE, Amount NUMBER(10), Acc_no REFERENCES Bank_Account(Acc_no), taxid REFERENCES my_Profile(taxid));

Table created.

SQL> desc payment;
 Name                                      Null?    Type
 ----------------------------------------- -------- ------------------------------
 CIN                                       NOT NULL NUMBER(15)
 BANK                                               VARCHAR2(20)
 PAY_DATE                                           DATE
 AMOUNT                                             NUMBER(10)
 ACC_NO                                             NUMBER(15)
 TAXID                                              NUMBER(15)
```

Schedule

```
SQL> create table Schedule(Skd_Date DATE, Status_confirmation VARCHAR(20), taxid REFERENCES my_Profile(taxid));

Table created.

SQL> desc Schedule;
 Name                                      Null?    Type
 ----------------------------------------- -------- ------------------------------
 SKD_DATE                                           DATE
 STATUS_CONFIRMATION                                VARCHAR2(20)
 TAXID                                              NUMBER(15)
```

Document

```
SQL> create table Document(Doc_id NUMBER(10) PRIMARY KEY, Doc_type VARCHAR(20), Status VARCHAR(15));

Table created.

SQL> desc document;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 DOC_ID                                    NOT NULL NUMBER(10)
 DOC_TYPE                                           VARCHAR2(20)
 STATUS                                             VARCHAR2(15)
```

Inserting in Tables

my_Profile

```
SQL> select * from my_profile;

     TAXID FNAME      MNAME      LNAME      GENDE DOB       ADDRESS            CITY            DOCID
---------- ---------- ---------- ---------- ----- --------- ------------------ --------------- ----------
     70322 Dhruv      Umesh      Sompura    M     07-MAR-02 thakur village     mumbai               12345
     30572 Ishan      Rajesh     Kasat      M     12-JUN-02 Amravati           Nagpur               67890
     18124 Samyuktha  Arjun      Shah       F     04-FEB-01 Kota               Chambal               8642
     26322 Mohit      Jignesh    Raval      M     26-MAR-72 kandivali          mumbai               35791
     10076 Dhvani     Jayesh     Patel      F     18-DEC-64 Rajender Nagar     Delhi                29835
```

Registration

```
SQL> insert into registration values(99342, 10076, 8425018090,'Dhvani','Jayesh','Patel','jayho5678')
  2   ;

1 row created.

SQL> insert into registration values(23987, 70322, 9594675960,'Dhruv','Umesh','Sompura','drum&&#67')
  2   ;

1 row created.

SQL>  insert into registration values(76543, 26322, 9619785618,'Mohit','Jignesh','Raval','moroko123')
  2  ;

1 row created.

SQL> insert into registration values(78901, 30572, 8976456734,'Ishan','Rajesh','Kasat','raj223ih')
  2   ;

1 row created.

SQL>
SQL>  insert into registration values(45678, 18124, 9920589020,'Samyuktha','Arjun','Shah','sam8901#');

1 row created.

SQL> select * from registration;

   USER_ID      TAXID   PHONE_NO FNAME      MNAME      LNAME      PASSWORD
---------- ---------- ---------- ---------- ---------- ---------- ----------
     99342      10076 8425018090 Dhvani     Jayesh     Patel      jayho5678
     23987      70322 9594675960 Dhruv      Umesh      Sompura    drum&&#67
     76543      26322 9619785618 Mohit      Jignesh    Raval      moroko123
     78901      30572 8976456734 Ishan      Rajesh     Kasat      raj223ih
     45678      18124 9920589020 Samyuktha  Arjun      Shah       sam8901#
```

Login

```
SQL> insert into login values('99342','jayho5678');

1 row created.

SQL> insert into login values('45678','sam8901#');

1 row created.

SQL> insert into login values('76543','moroko123');

1 row created.

SQL> insert into login values('23987','drum&&#67')
  2  ;

1 row created.

SQL> insert into login values('78901','raj223ih');

1 row created.

SQL> select * from login;

   USER_ID PASSWORD
---------- ----------
     99342 jayho5678
     45678 sam8901#
     76543 moroko123
     23987 drum&&#67
     78901 raj223ih
```

Bank_Account

```
SQL> insert into bank_account values(1234567890,'HDFC Bank','Current','QWER12345',70322);

1 row created.

SQL> insert into bank_account values(9876543210,'ICICI Bank','Savings','DWFE91826',30572);

1 row created.

SQL> insert into bank_account values(1357924680,'Axis Bank','FD','ASDF35791',18124);

1 row created.

SQL> insert into bank_account values(2468013579,'Canara Bank','Savings','RIDT56091',26322);

1 row created.

SQL> insert into bank_account values(5674389210,'Bank Of Baroda','FD','BOBB3576',10076)
  2  ;

1 row created.

SQL> select * from bank_account;

    ACC_NO BANK                 ACC_TYPE        BIFSC               TAXID
---------- -------------------- --------------- --------------- ----------
1234567890 HDFC Bank            Current         QWER12345           70322
9876543210 ICICI Bank           Savings         DWFE91826           30572
1357924680 Axis Bank            FD              ASDF35791           18124
2468013579 Canara Bank          Savings         RIDT56091           26322
5674389210 Bank Of Baroda       FD              BOBB3576            10076
```

Payment

```
SQL> insert into payment values(91122,'Bank Of Baroda','12-nov-2021',80000,5674389210,10076);

1 row created.

SQL> insert into payment values(27922,'Canara Bank','4-oct-2021',100000,2468013579,26322);

1 row created.

SQL> insert into payment values(24112,'Axis Bank','3-may-2020',10000,1357924680,18124);

1 row created.

SQL> insert into payment values(78679,'ICICI Bank','24-nov-2021',50000,9876543210,30572);

1 row created.

SQL> insert into payment values(69420,'HDFC Bank','30-oct-2021',200000,1234567890,70322);

1 row created.

SQL> select * from payment;

       CIN BANK                PAY_DATE      AMOUNT     ACC_NO      TAXID
---------- -------------------- --------- ---------- ---------- ----------
     91122 Bank Of Baroda       12-NOV-21      80000 5674389210      10076
     27922 Canara Bank          04-OCT-21     100000 2468013579      26322
     24112 Axis Bank            03-MAY-20      10000 1357924680      18124
     78679 ICICI Bank           24-NOV-21      50000 9876543210      30572
     69420 HDFC Bank            30-OCT-21     200000 1234567890      70322
```

Schedule

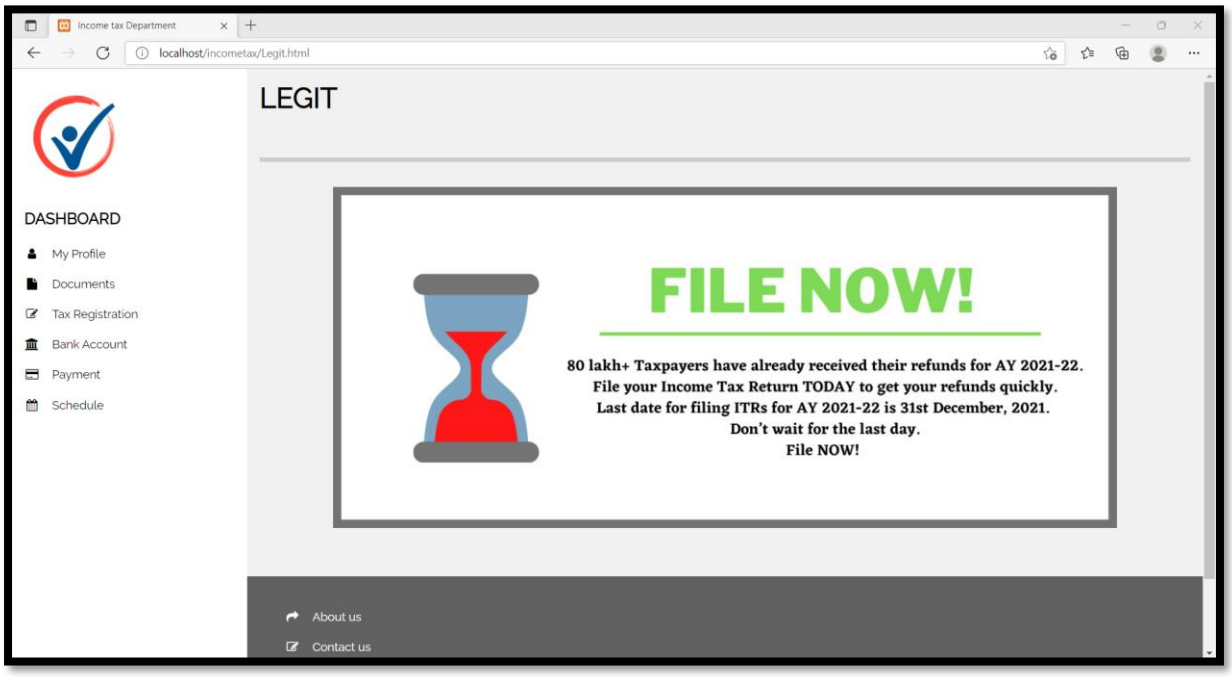
```
SQL> insert into Schedule values('7-mar-2021', 'Confirmed',10076);

1 row created.

SQL> insert into Schedule values('30-may-2020', 'Not Confirmed',26322);

1 row created.

SQL> insert into Schedule values('20-oct-2021', 'Not Confirmed',18124);

1 row created.

SQL> insert into Schedule values('25-nov-2021', 'Confirmed',30572);

1 row created.

SQL> insert into Schedule values('30-nov-2021', 'Confirmed',70322);

1 row created.

SQL> select * from schedule;

SKD_DATE  STATUS_CONFIRMATION       TAXID
--------- -------------------- ----------
07-MAR-21 Confirmed                10076
30-MAY-20 Not Confirmed            26322
20-OCT-21 Not Confirmed            18124
25-NOV-21 Confirmed                30572
30-NOV-21 Confirmed                70322
```

Document

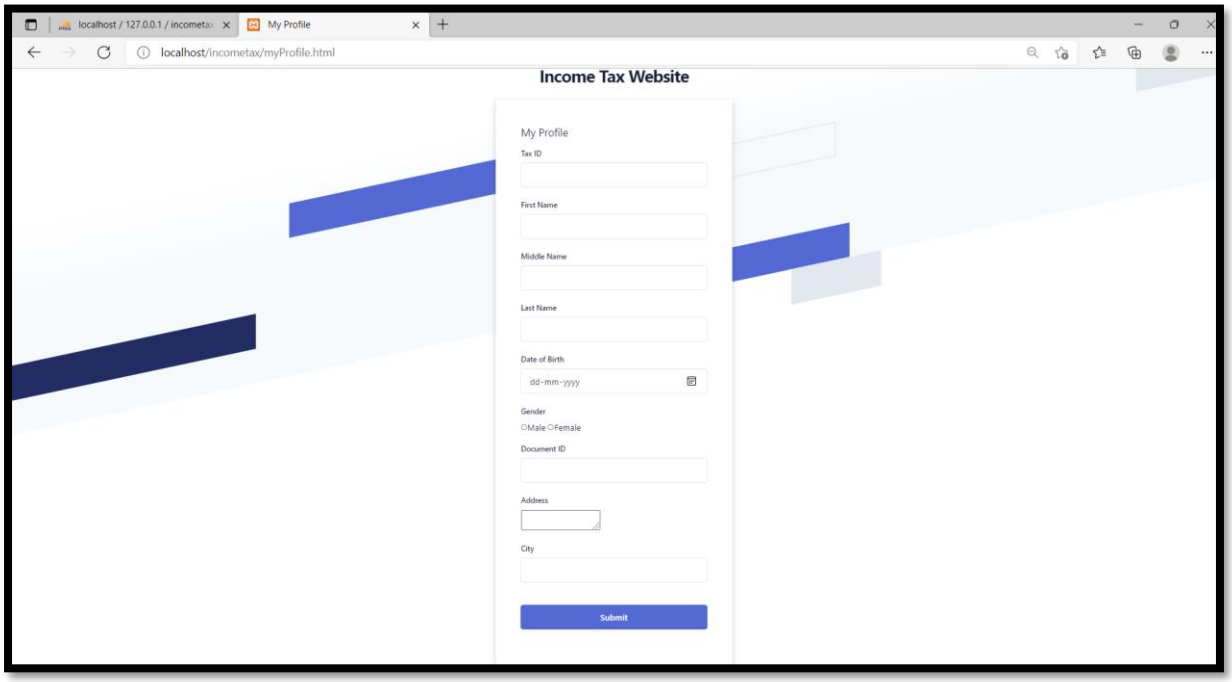
```
SQL> insert into Document values(29835, 'Form 16','Accepted');

1 row created.

SQL>
SQL>  insert into Document values(35791, 'PAN','Accepted');

1 row created.

SQL>  insert into Document values(08642, 'Form 16','Rejected');

1 row created.

SQL>  insert into Document values(67890, 'PAN','Accepted');

1 row created.

SQL> insert into Document values(12345, 'Form 26','Accepted')
  2  ;

1 row created.

SQL> select * from document;

    DOC_ID DOC_TYPE            STATUS
---------- ------------------- --------------
     29835 Form 16             Accepted
     35791 PAN                 Accepted
      8642 Form 16             Rejected
     67890 PAN                 Accepted
     12345 Form 26             Accepted
```

Output

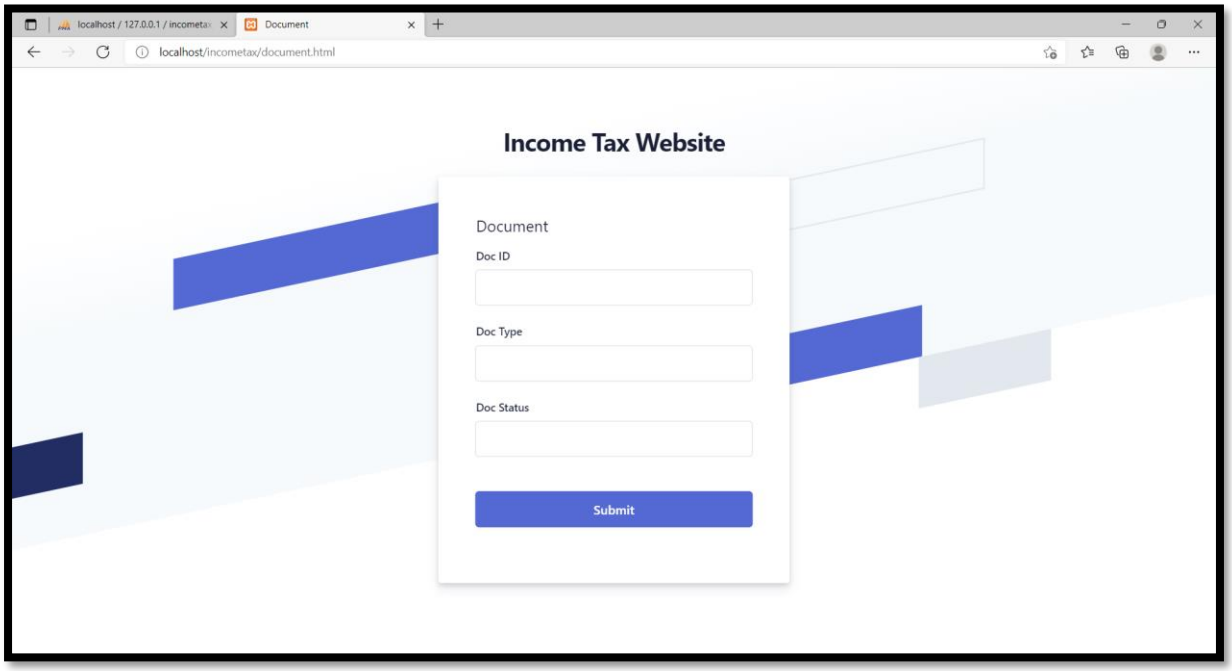
Front-end implementation



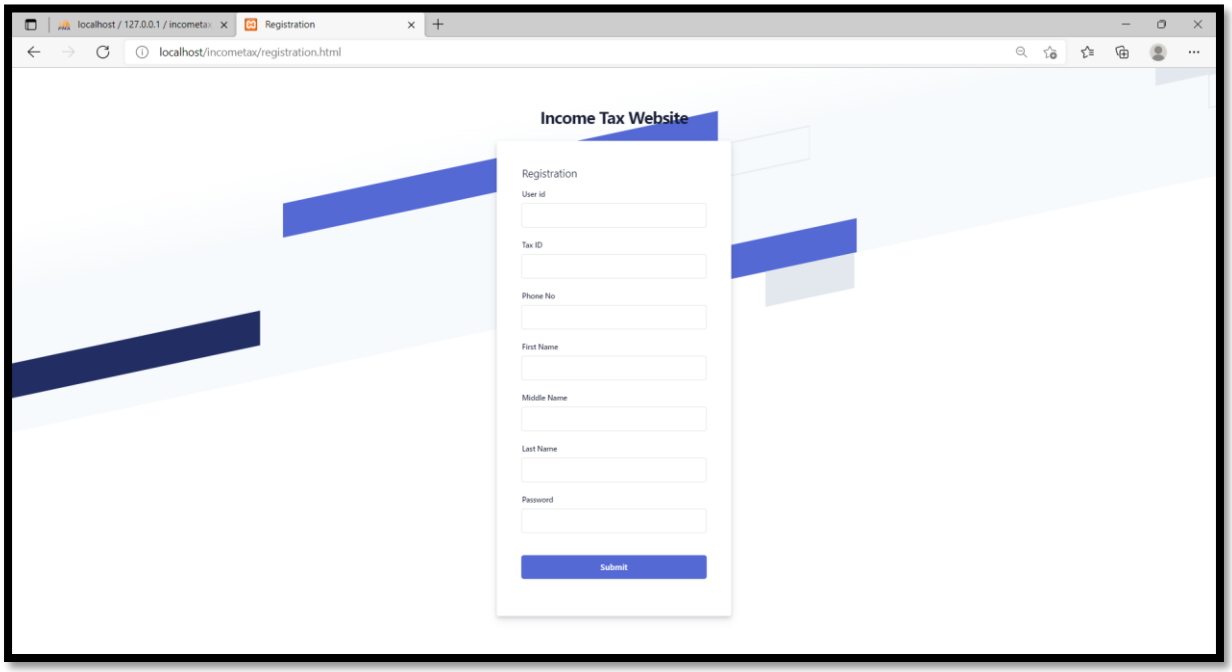
My Profile



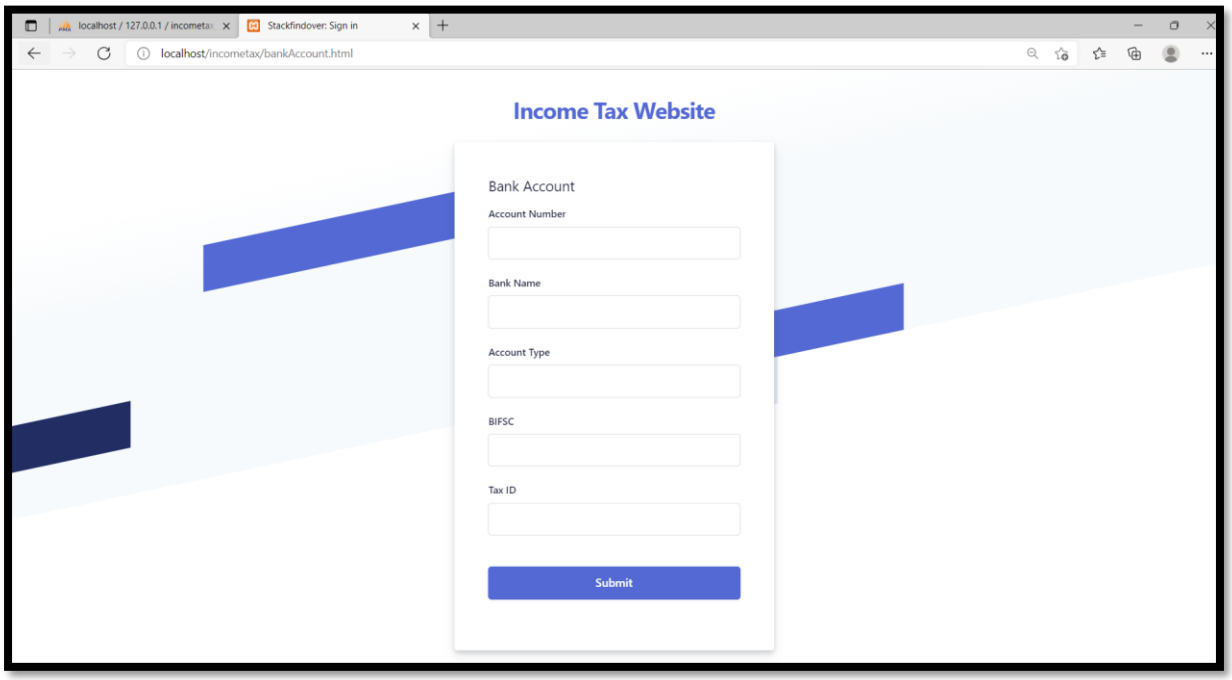
Document



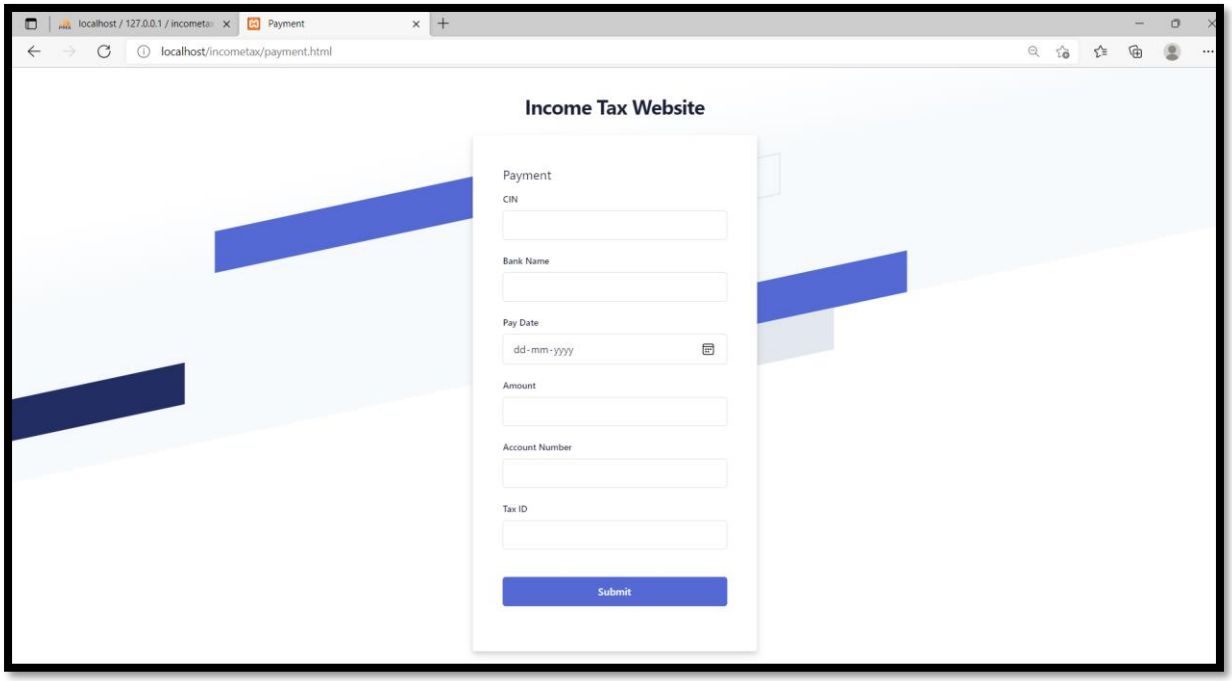
Registration



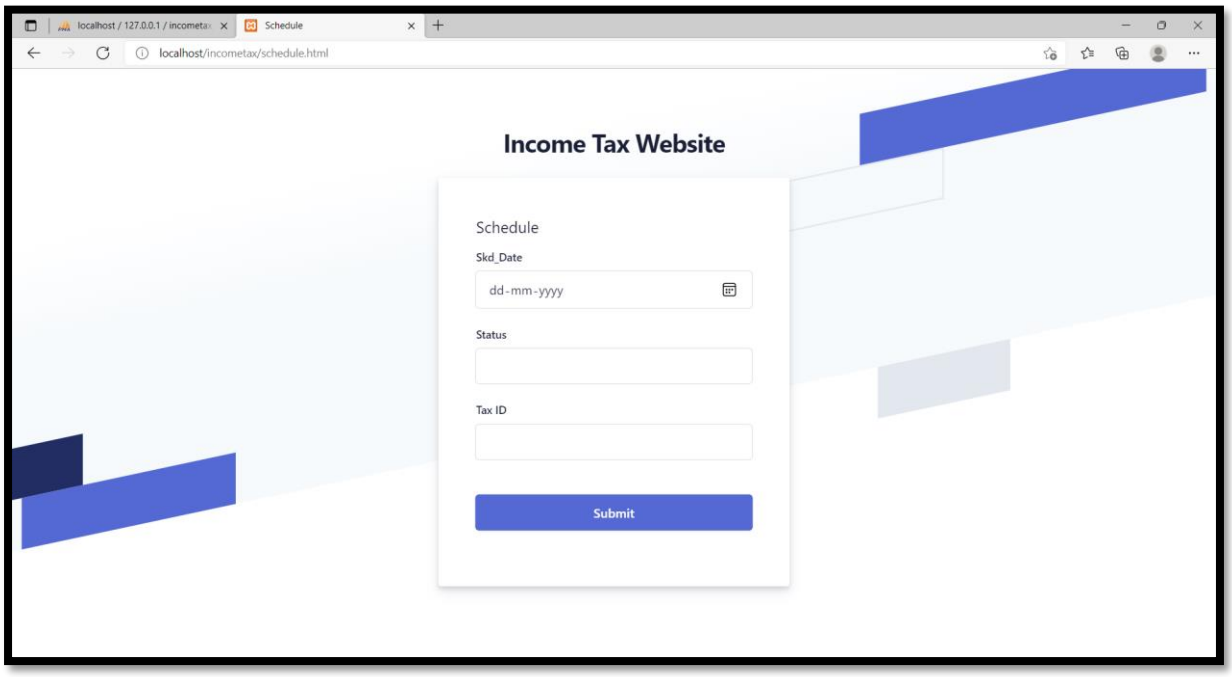
Bank Account



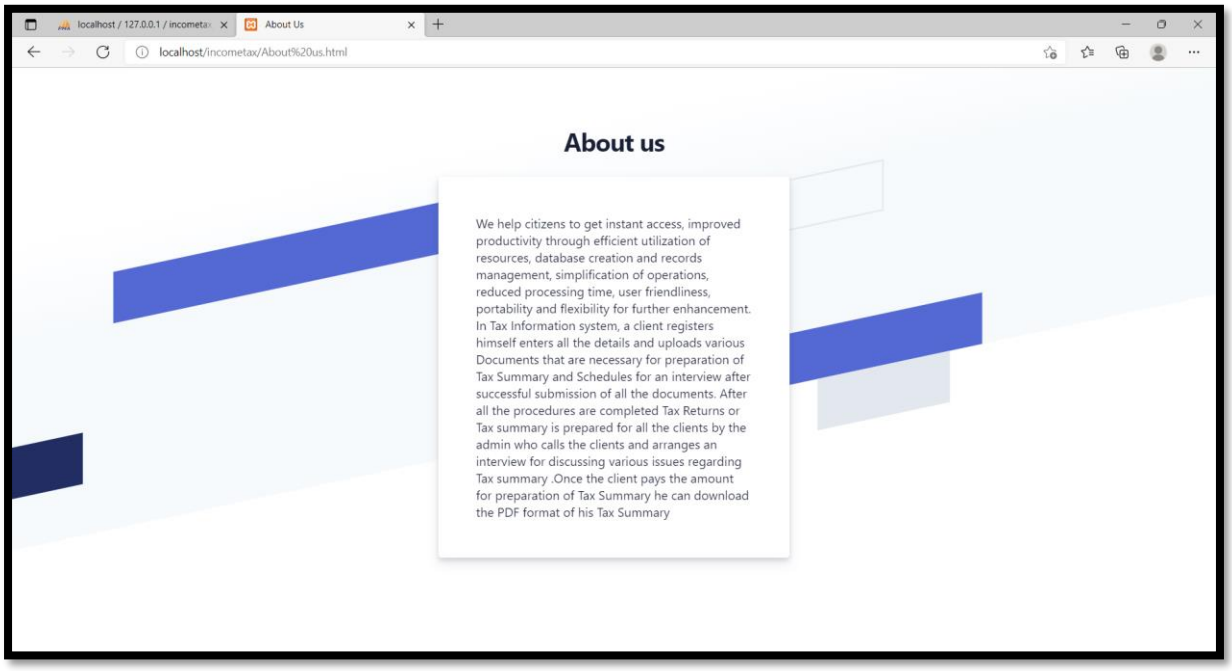
Payment



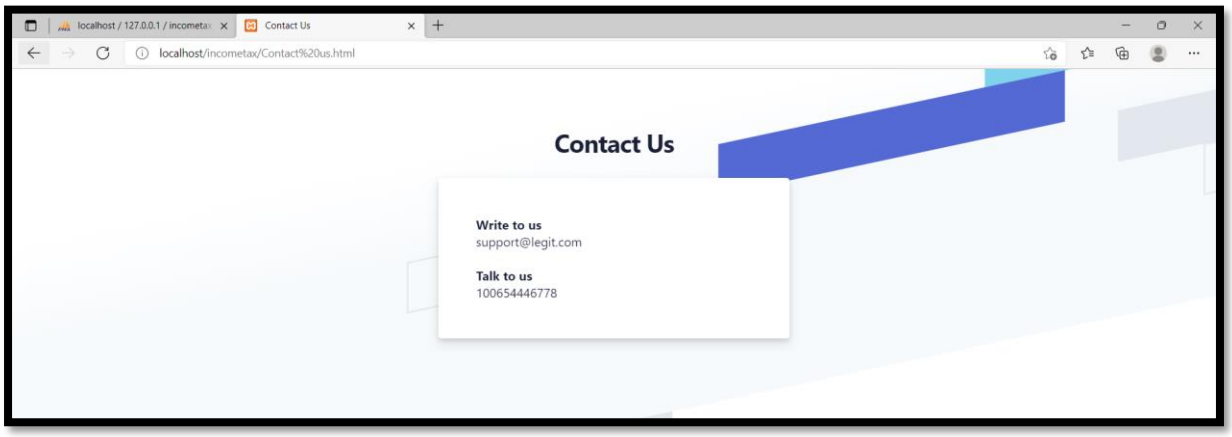
Schedule



About us

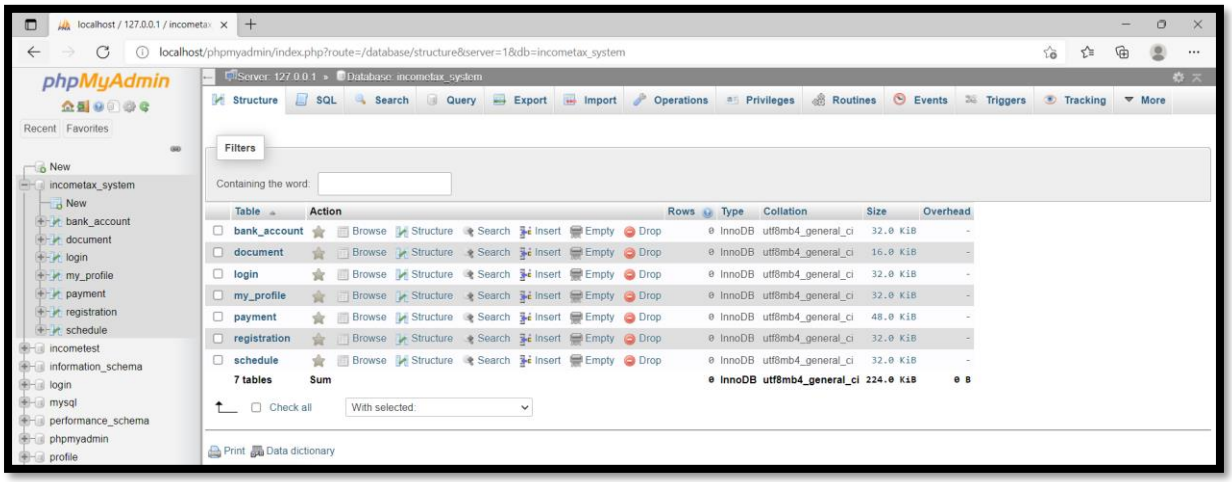


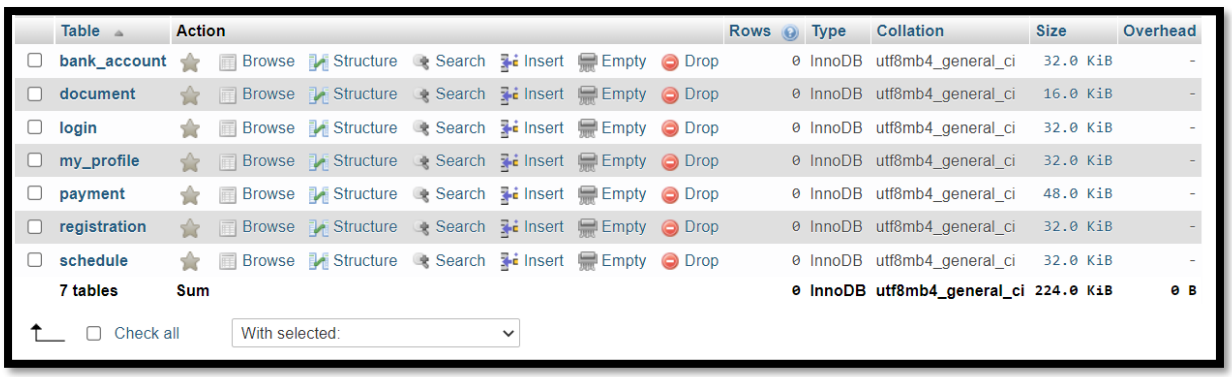
Contact us



Back-end Implementation

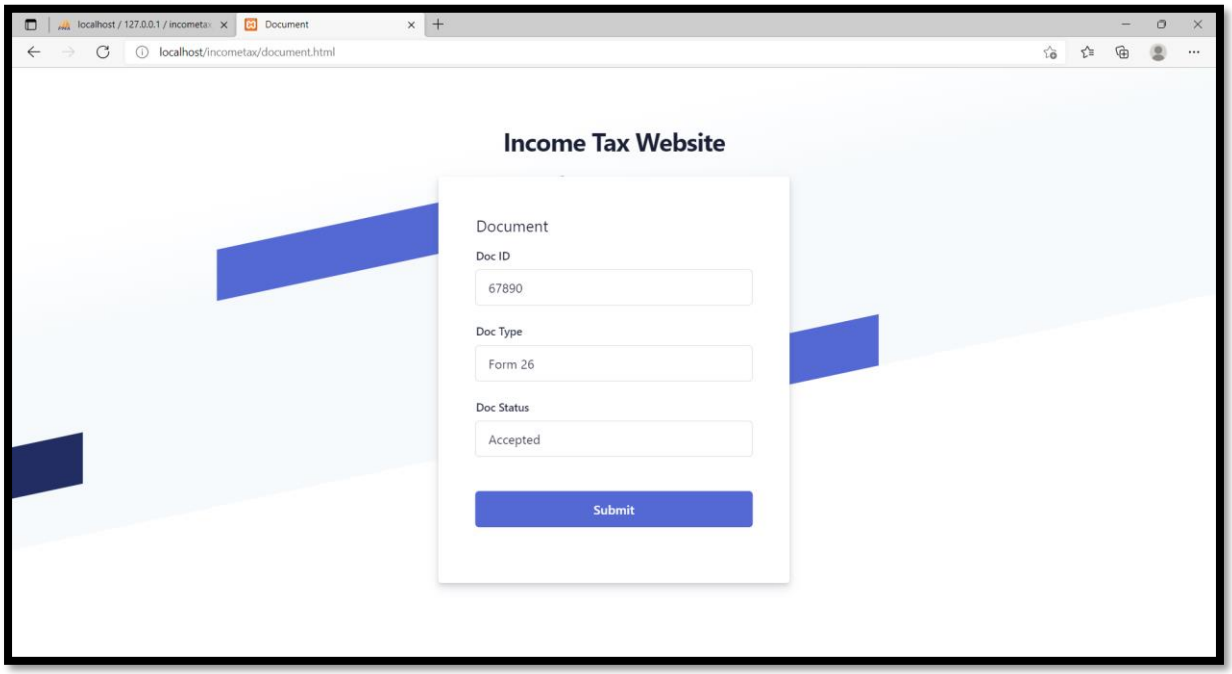
We have created our Database using Xampp MYSQL PHP server

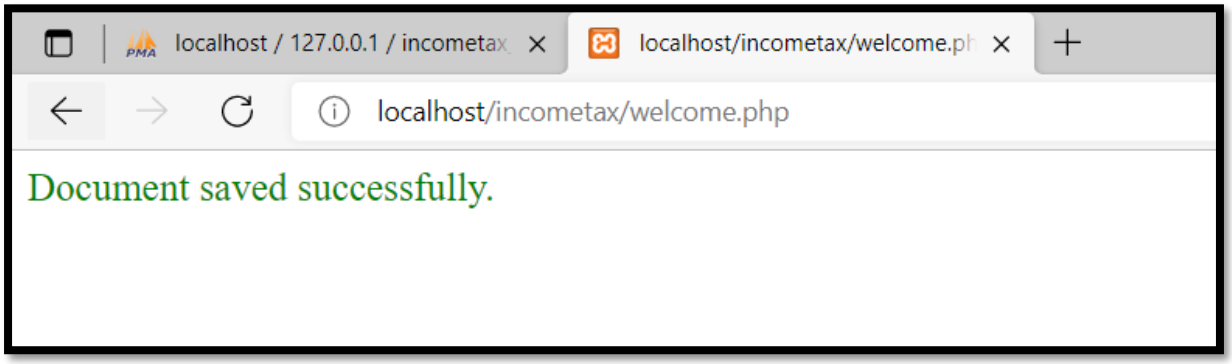


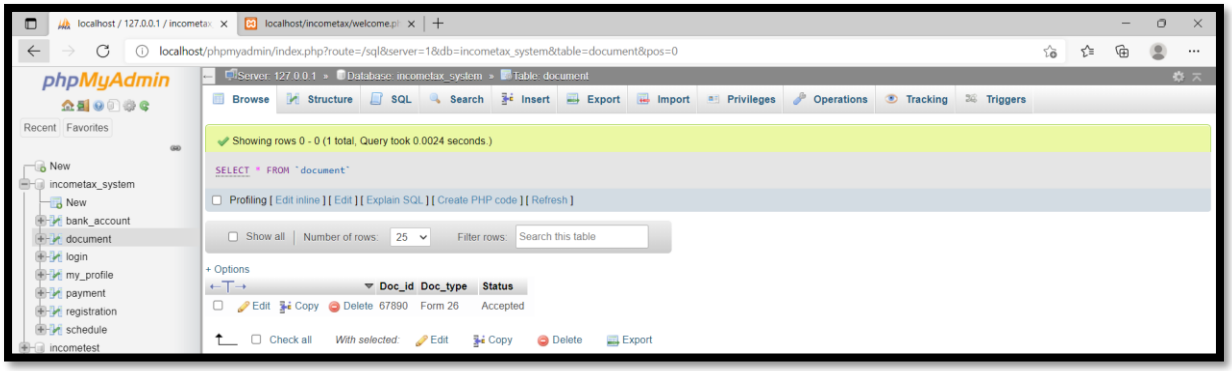


Database

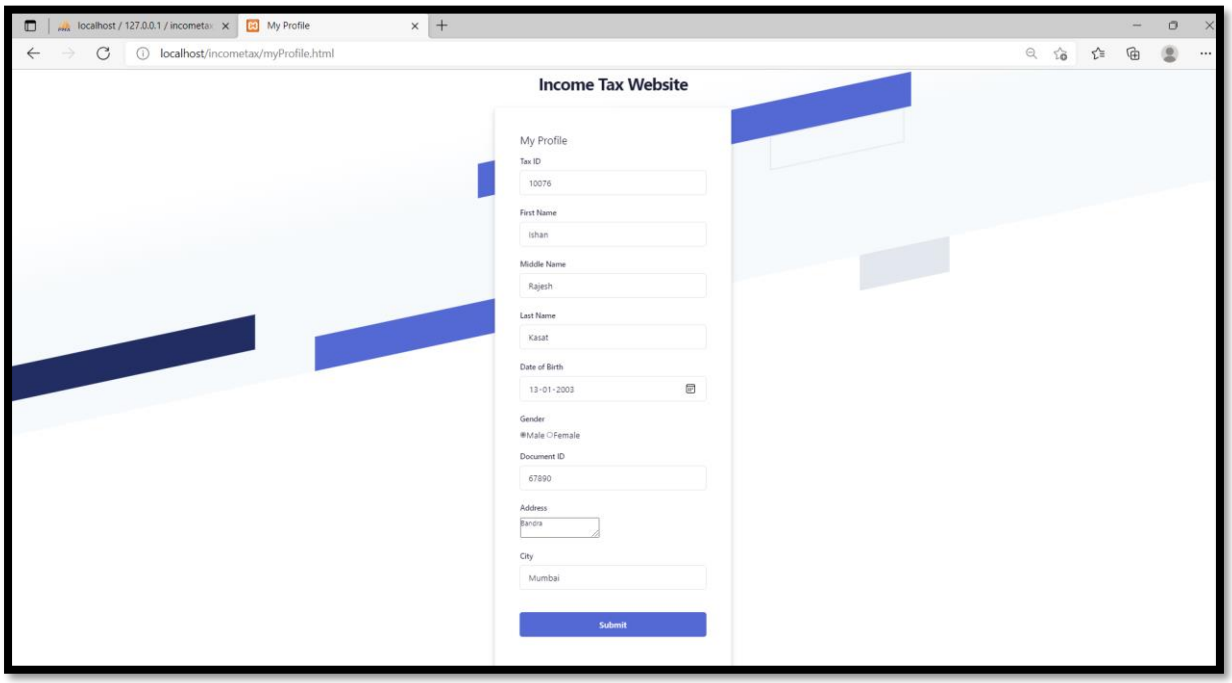
Document

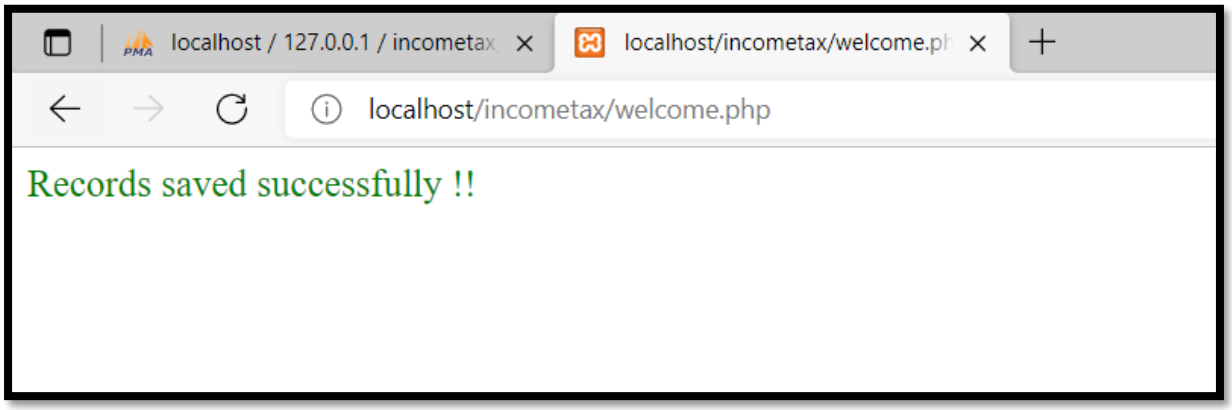


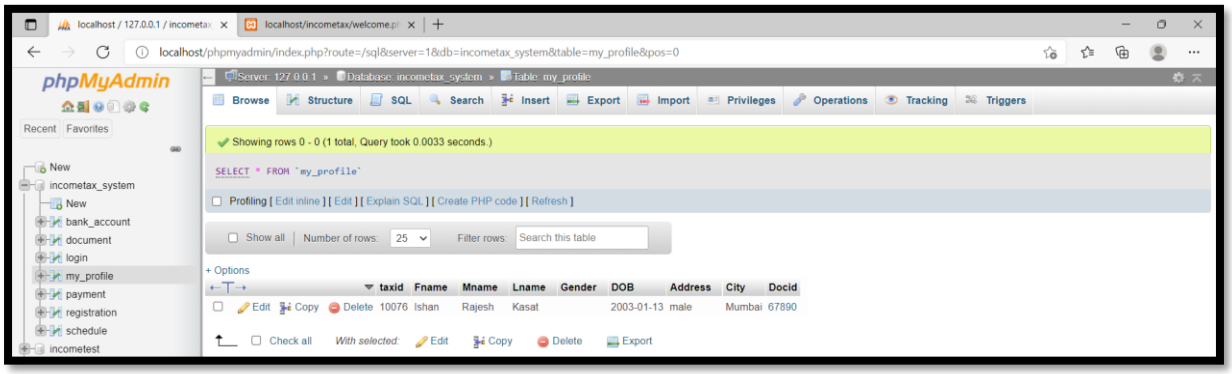




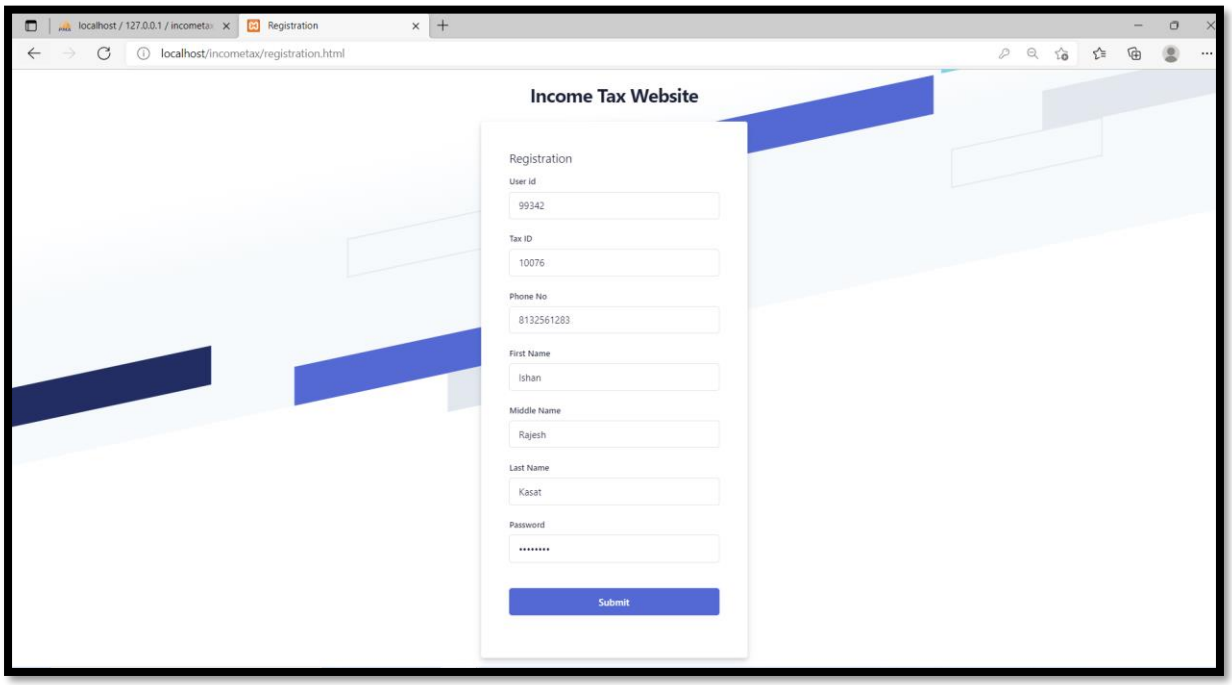
My profile

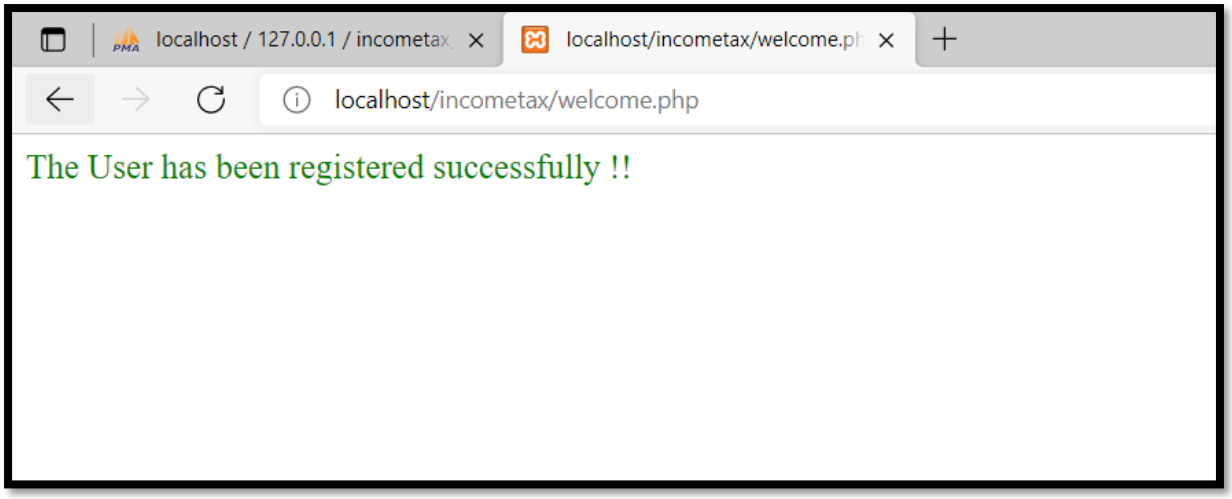

localhost / 127.0.0.1 / incometax
My Profile
localhost/incometax/myProfile.html
Income Tax Website
My Profile
Tax ID
10076
First Name
Ishan
Middle Name
Rajesh
Last Name
Kasat
Date of Birth
13-01-2003
Gender
Male Female
Document ID
67890
Address
Bandra
City
Mumbai
Submit

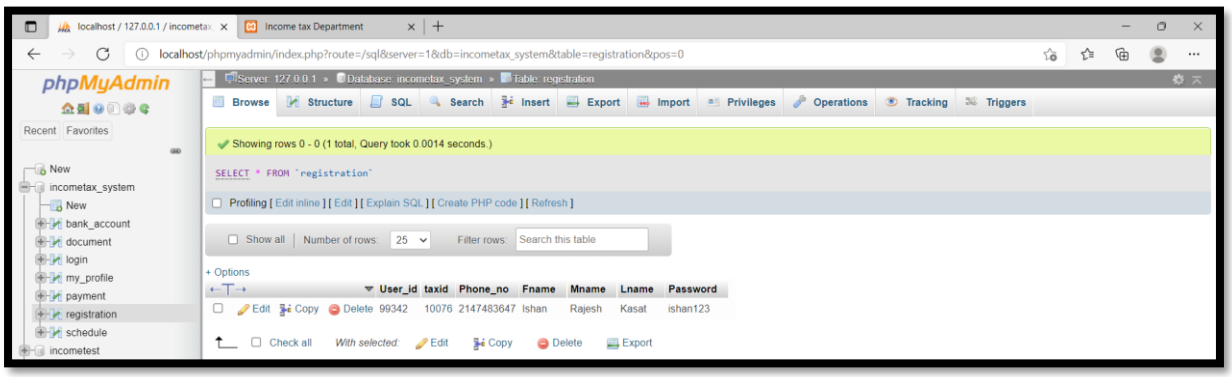

localhost / 127.0.0.1 / incometax
localhost/incometax/welcome.ph
localhost/incometax/welcome.php
Records saved successfully !!


localhost / 127.0.0.1 / incometax
localhost/incometax/welcome.ph
localhost/phpmyadmin/index.php?route=/sql&server=1&db=incometax_system&table=my_profile&pos=0
phpMyAdmin
Recent Favorites
New
incometax_system
New
bank_account
document
login
my_profile
payment
registration
schedule
incometest
Server: 127.0.0.1 » Database: incometax_system » Table: my_profile
Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers
Showing rows 0 - 0 (1 total, Query took 0.0033 seconds.)
SELECT * FROM `my_profile`
Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
Show all Number of rows: 25 Filter rows: Search this table
+ Options
taxid Fname Mname Lname Gender DOB Address City Docid
Edit Copy Delete 10076 Ishan Rajesh Kasat 2003-01-13 male Mumbai 67890
Check all With selected: Edit Copy Delete Export

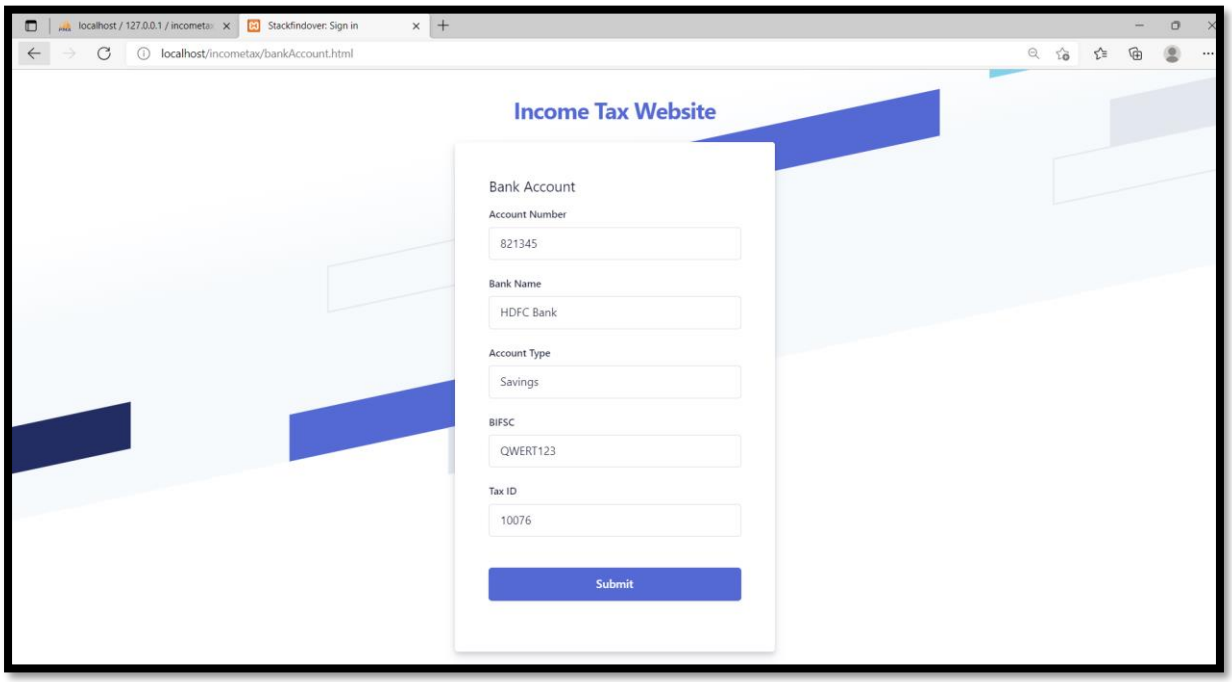
Registration

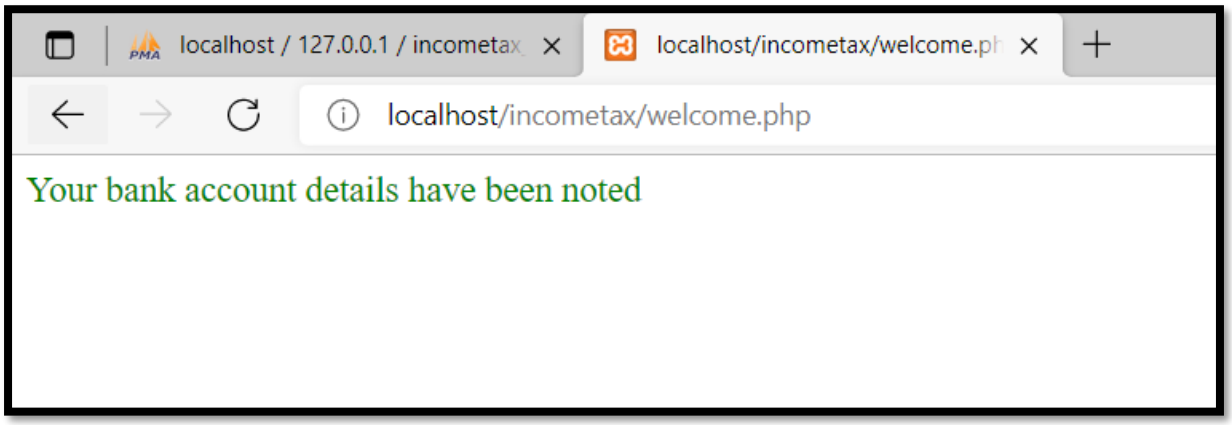


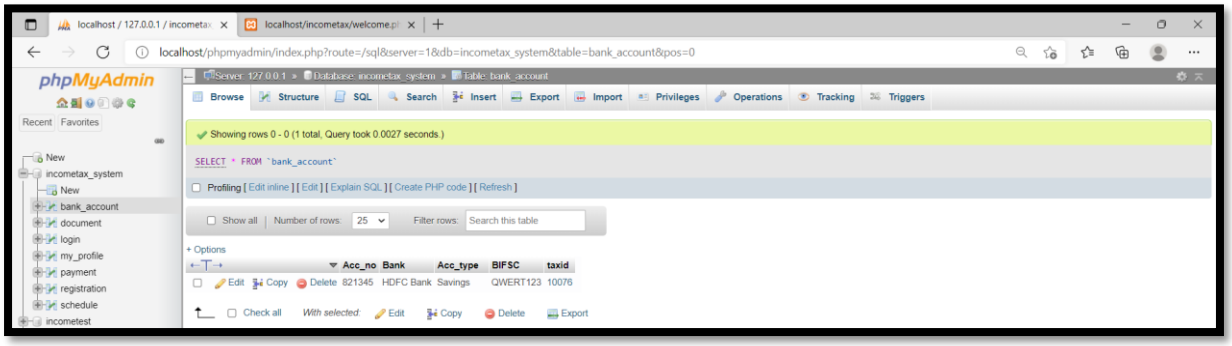




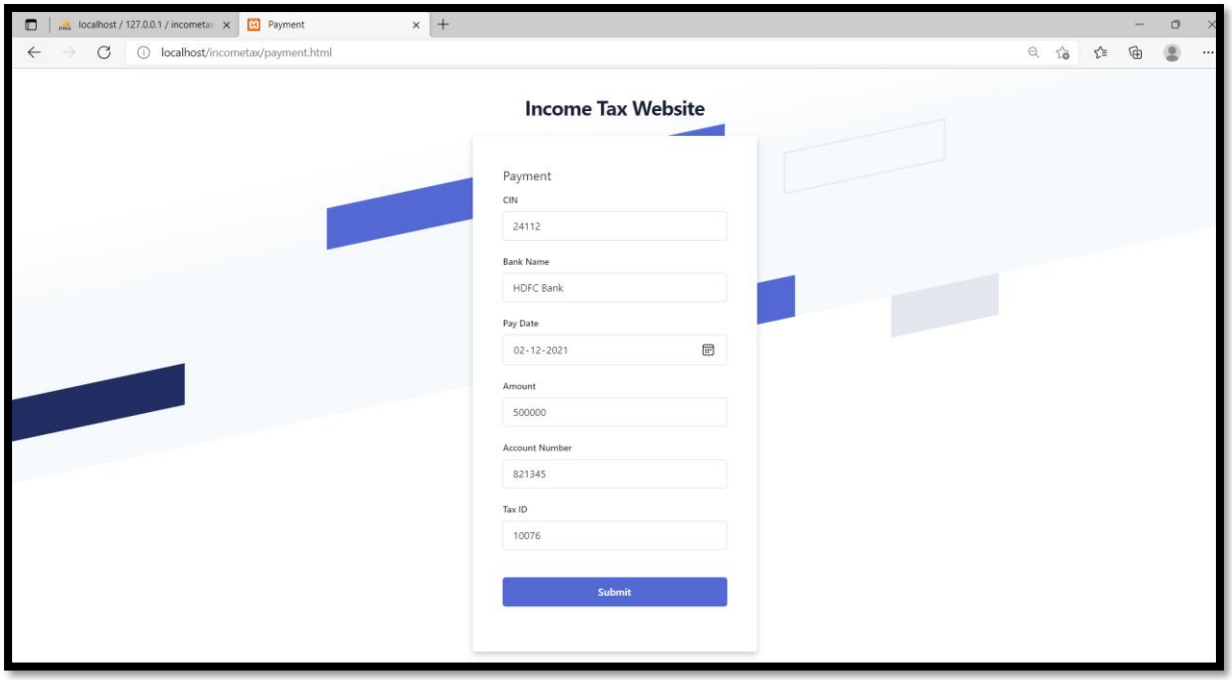
Bank Account

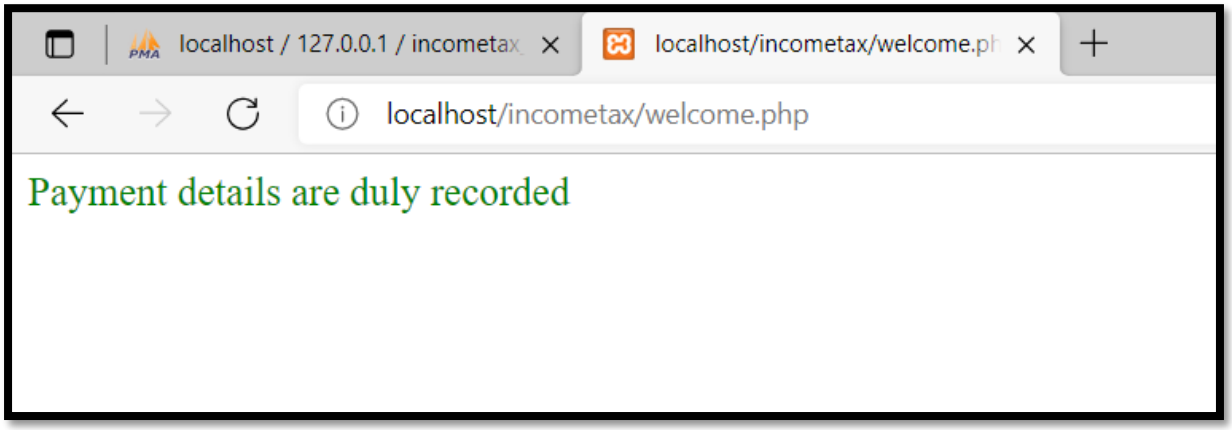


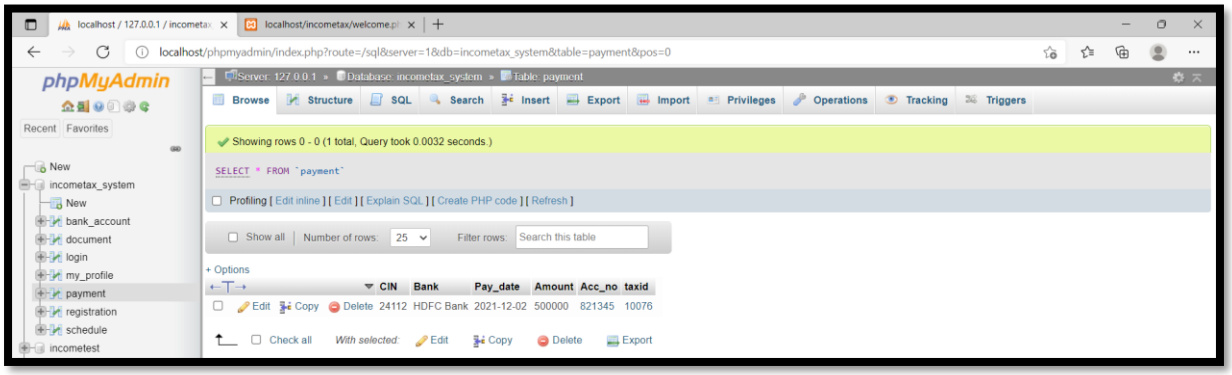




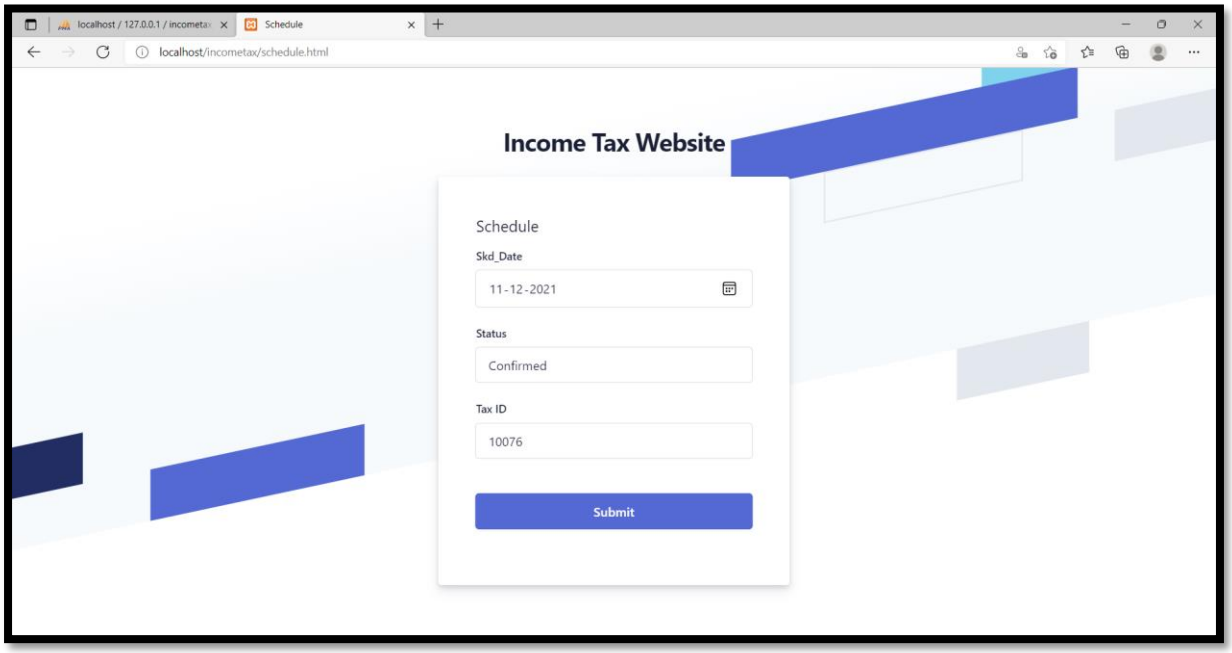
Payment

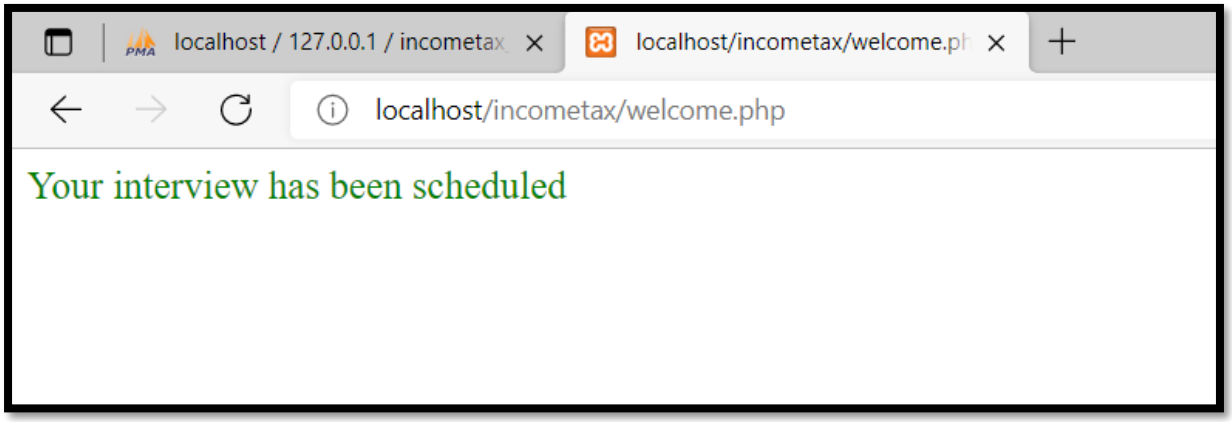

localhost / 127.0.0.1 / incometax
Payment
localhost/incometax/payment.html
Income Tax Website
Payment
CIN
24112
Bank Name
HDFC Bank
Pay Date
02-12-2021
Amount
500000
Account Number
821345
Tax ID
10076
Submit

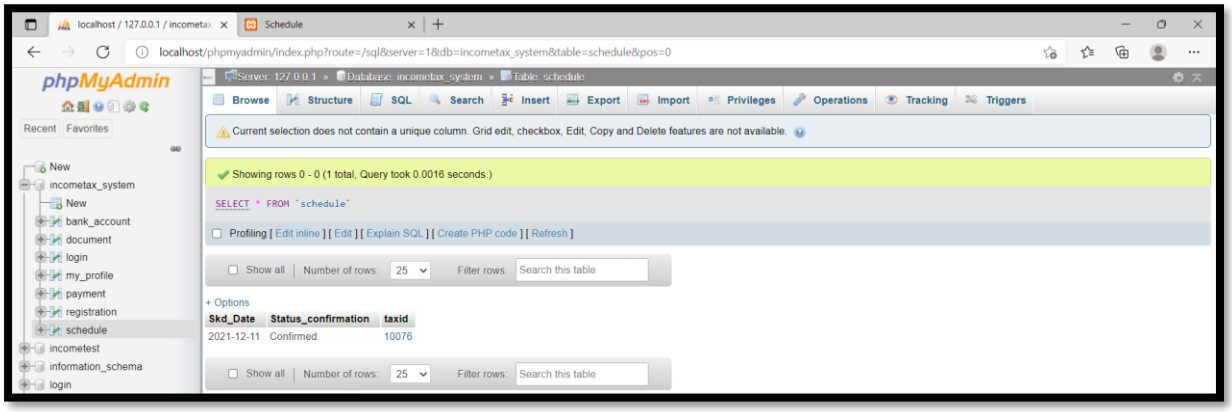

localhost / 127.0.0.1 / incometax
localhost/incometax/welcome.ph
localhost/incometax/welcome.php
Payment details are duly recorded


localhost/phpmyadmin/index.php?route=/sql&server=1&db=incometax_system&table=payment&pos=0
phpMyAdmin
Server: 127.0.0.1 » Database: incometax_system » Table: payment
Browse
Structure
SQL
Search
Insert
Export
Import
Privileges
Operations
Tracking
Triggers
Showing rows 0 - 0 (1 total, Query took 0.0032 seconds.)
SELECT * FROM `payment`
Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
Show all
Number of rows: 25
Filter rows: Search this table
+ Options
CIN Bank Pay_date Amount Acc_no taxid
Edit Copy Delete 24112 HDFC Bank 2021-12-02 500000 821345 10076
Check all
With selected:
Edit
Copy
Delete
Export
New
incometax_system
bank_account
document
login
my_profile
payment
registration
schedule
incometest

Schedule


Schedule
localhost/incometax/schedule.html
Income Tax Website
Schedule
Skd_Date
11-12-2021
Status
Confirmed
Tax ID
10076
Submit


localhost / 127.0.0.1 / incometax
localhost/incometax/welcome.ph
localhost/incometax/welcome.php
Your interview has been scheduled


Schedule
localhost/phpmyadmin/index.php?route=/sql&server=1&db=incometax_system&table=schedule&pos=0
phpMyAdmin
Server: 127.0.0.1 » Database: incometax_system » Table: schedule
Browse
Structure
SQL
Search
Insert
Export
Import
Privileges
Operations
Tracking
Triggers
Current selection does not contain a unique column. Grid edit, checkbox, Edit, Copy and Delete features are not available.
Showing rows 0 - 0 (1 total, Query took 0.0016 seconds.)
SELECT * FROM `schedule`
Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
Show all
Number of rows: 25
Filter rows: Search this table
+ Options
Skd_Date
Status_confirmation
taxid
2021-12-11
Confirmed
10076
incometax_system
bank_account
document
login
my_profile
payment
registration
schedule
incometest
information_schema

Codes

myprofile.php

```
<?php
$servername = "localhost";
$username = "root";
$password = "";
// Create connection
$conn = new mysqli($servername,$username, $password);
// Check connection
if ($conn->connect_error) {
 die("Connection failed: " . $conn->connect_error);
}
echo "Connected successfully";

mysqli_select_db($conn,'incometax_system');
$query="INSERT INTO ";
mysqli_query($conn,$query);
$a = '';
if( isset( $_POST["txtName"])) {
 $a = $_POST["txtName"];
}
$b = '';
if( isset( $_POST["txtMiddleName"])) {
 $b = $_POST["txtMiddleName"];
}
$c= '';
if( isset( $_POST["txtLastName"])) {
 $c = $_POST["txtLastName"];
```

```
}
$d= '';
if( isset( $_POST["dob"])) {
 $d = $_POST["dob"];
}
$e = '';
if( isset( $_POST["txttaxid"])) {
 $e = $_POST["txttaxid"];
}
$f = '';
if( isset( $_POST["txtAddress"])) {
 $f = $_POST["txtAddress"];
}
$g = '';
if( isset( $_POST["ab"])) {
 $f = $_POST["ab"];
}
$h = '';
if( isset( $_POST["txtcity"])) {
 $h = $_POST["txtcity"];
}
$i = '';
if( isset( $_POST["txtdocid"])) {
 $i = $_POST["txtdocid"];
}

$query1="INSERT INTO `incometax_system`.`my_profile` (`taxid`, `Fname`, `Mname`,
`Lname`, `Gender`, `DOB`, `Address`, `City`, `Docid`) VALUES
('$e','$a','$b','$c','$g','$d','$f','$h','$i') ";
$res1=mysqli_query($conn,$query1);
if($res1)
```

```
{session_start();
   $_SESSION['success_message'] = "Records saved successfully !!";
   header("Location: welcome.php");
   exit();}
else {printf("query1Errormessage: %s\n", $conn->error);}

?>
```

documents.php

```
<?php

   $docid = $_POST['docid'];
   $doctype = $_POST['doctype'];
   $docstatus = $_POST['docstatus'];

   // Database connection
   $conn = new mysqli('localhost','root','','incometax_system');
   if($conn->connect_error){
      echo "$conn->connect_error";
      die("Connection Failed : ". $conn->connect_error);
   } else {
      $stmt = $conn->prepare("insert into document(Doc_id,Doc_type,Status) values(?, ?,
?)");
      $stmt->bind_param("iss",$docid,$doctype,$docstatus);
      $execval = $stmt->execute();
      session_start();
      $_SESSION['success_message'] = "Document saved successfully.";
      header("Location: welcome.php");
      exit();
      $stmt->close();
      $conn->close();
```

```
   }
?>
```

login.php

```
<?php
$servername = "localhost";
$username = "root";
$password = "";
// Create connection
$conn = new mysqli($servername,$username, $password);
// Check connection
if ($conn->connect_error) {
 die("Connection failed: " . $conn->connect_error);
}
echo "Connected successfully";

mysqli_select_db($conn,'incometax_system');
$query="INSERT INTO ";
mysqli_query($conn,$query);

$a= '';
if( isset( $_POST["userid"])) {
 $a = $_POST["userid"];
}
$b = '';
if( isset( $_POST["password"])) {
 $b = $_POST["password"];
}

$query1="INSERT INTO `incometax_system`.`login` (`User_id`,`Password`) VALUES
('$a','$b') ";
```

```
$res1=mysqli_query($conn,$query1);
if($res1)
{echo"query1success";}
else {printf("query1Errormessage: %s\n", $conn->error);}

?>
```

registration.php

```
<?php
$servername = "localhost";
$username = "root";
$password = "";
// Create connection
$conn = new mysqli($servername,$username, $password);
// Check connection
if ($conn->connect_error) {
 die("Connection failed: " . $conn->connect_error);
}
echo "Connected successfully";

mysqli_select_db($conn,'incometax_system');
$query="INSERT INTO ";
mysqli_query($conn,$query);
$a = '';
if( isset( $_POST["txtName"])) {
 $a = $_POST["txtName"];
}
$b = '';
if( isset( $_POST["txtMiddleName"])) {
 $b = $_POST["txtMiddleName"];
```

```
}
$c= '';
if( isset( $_POST["txtLastName"])) {
 $c = $_POST["txtLastName"];
}
$d= '';
if( isset( $_POST["userid"])) {
 $d = $_POST["userid"];
}
$e = '';
if( isset( $_POST["txttaxid"])) {
 $e = $_POST["txttaxid"];
}
$f = '';
if( isset( $_POST["phone"])) {
 $f = $_POST["phone"];
}
$g = '';
if( isset( $_POST["password"])) {
 $g = $_POST["password"];
}

$query1="INSERT INTO `incometax_system`.`registration` (`User_id`, `taxid`, `Phone_no`,
`Fname`, `Mname`, `Lname`, `Password`) VALUES ('$d','$e','$f','$a','$b','$c','$g') ";
$res1=mysqli_query($conn,$query1);
if($res1)
{session_start();
   $_SESSION['success_message'] = "The User has been registered successfully !!";
   header("Location: welcome.php");
   exit();}
else {printf("query1Errormessage: %s\n", $conn->error);}
```

```
?>
```

bankaccount.php

```
<?php
$servername = "localhost";
$username = "root";
$password = "";
// Create connection
$conn = new mysqli($servername,$username, $password);
// Check connection
if ($conn->connect_error) {
 die("Connection failed: " . $conn->connect_error);
}
echo "Connected successfully";

mysqli_select_db($conn,'incometax_system');
$query="INSERT INTO ";
mysqli_query($conn,$query);
$a = '';
if( isset( $_POST["accountno"])) {
 $a = $_POST["accountno"];
}
$b = '';
if( isset( $_POST["bank"])) {
 $b = $_POST["bank"];
}
$c= '';
if( isset( $_POST["accountt"])) {
 $c = $_POST["accountt"];
```

```
}
$d= '';
if( isset( $_POST["bifsc"])) {
 $d = $_POST["bifsc"];
}
$e = '';
if( isset( $_POST["txttaxid"])) {
 $e = $_POST["txttaxid"];
}

$query1="INSERT INTO `incometax_system`.`bank_account` (`Acc_no`, `Bank`,
`Acc_type`, `BIFSC`, `taxid`) VALUES ('$a','$b','$c','$d','$e') ";
$res1=mysqli_query($conn,$query1);
if($res1)
{session_start();
   $_SESSION['success_message'] = "Your bank account details have been noted ";
   header("Location: welcome.php");
   exit();}
else {printf("query1Errormessage: %s\n", $conn->error);}

?>
```

payment.php

```
<?php
$servername = "localhost";
$username = "root";
$password = "";
// Create connection
$conn = new mysqli($servername,$username, $password);
// Check connection
if ($conn->connect_error) {
```

```
 die("Connection failed: " . $conn->connect_error);
}
echo "Connected successfully";

mysqli_select_db($conn,'incometax_system');
$query="INSERT INTO ";
mysqli_query($conn,$query);
$a = '';
if( isset( $_POST["cin"])) {
 $a = $_POST["cin"];
}
$b = '';
if( isset( $_POST["bank"])) {
 $b = $_POST["bank"];
}
$c= '';
if( isset( $_POST["payd"])) {
 $c = $_POST["payd"];
}
$d= '';
if( isset( $_POST["amount"])) {
 $d = $_POST["amount"];
}
$e = '';
if( isset( $_POST["accountno"])) {
 $e = $_POST["accountno"];
}
$f = '';
if( isset( $_POST["txttaxid"])) {
 $f = $_POST["txttaxid"];
```

```
}

$query1="INSERT INTO `incometax_system`.`payment` (`CIN`, `Bank`, `Pay_date`,
`Amount`, `Acc_no`, `taxid`) VALUES ('$a','$b','$c','$d','$e','$f')";
$res1=mysqli_query($conn,$query1);
if($res1)
{session_start();
   $_SESSION['success_message'] = "Payment details are duly recorded";
   header("Location: welcome.php");
   exit();}
else {printf("query1Errormessage: %s\n", $conn->error);}

?>
```

schedule.php

```
<?php
$servername = "localhost";
$username = "root";
$password = "";
// Create connection
$conn = new mysqli($servername,$username, $password);
// Check connection
if ($conn->connect_error) {
 die("Connection failed: " . $conn->connect_error);
}
echo "Connected successfully";

mysqli_select_db($conn,'incometax_system');
$query="INSERT INTO ";
mysqli_query($conn,$query);
$a = '';
```

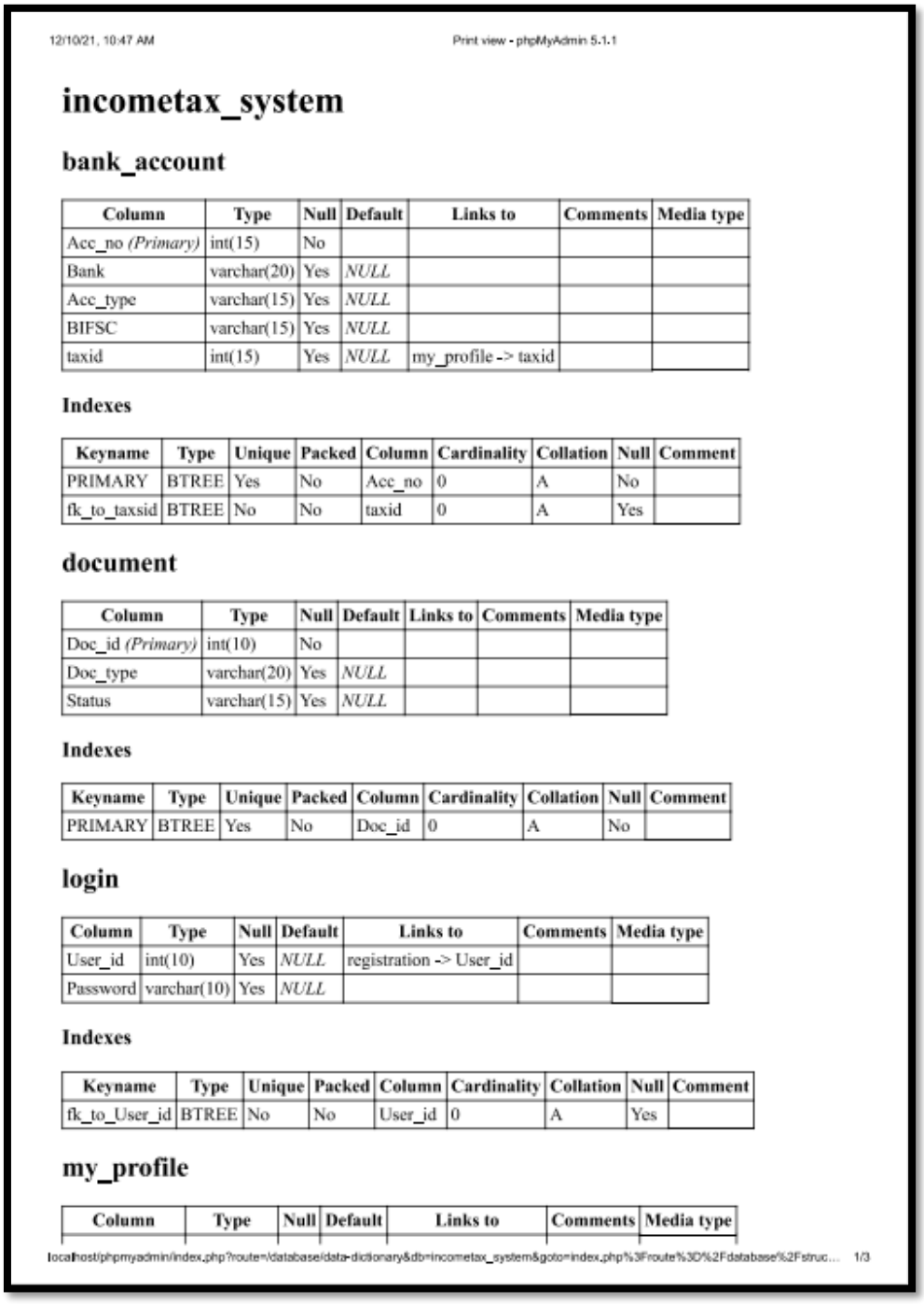
```
if( isset( $_POST["skd"])) {
 $a = $_POST["skd"];
}
$b = '';
if( isset( $_POST["status"])) {
 $b = $_POST["status"];
}
$c = '';
if( isset( $_POST["txttaxid"])) {
 $c = $_POST["txttaxid"];
}

$query1="INSERT INTO `incometax_system`.`schedule` (`Skd_Date`,
`Status_confirmation`, `taxid`) VALUES ('$a','$b','$c')";
$res1=mysqli_query($conn,$query1);
if($res1)
{session_start();
   $_SESSION['success_message'] = "Your interview has been scheduled";
   header("Location: welcome.php");
   exit();}
else {printf("query1Errormessage: %s\n", $conn->error);}

?>
```

welcome.php

```
<?php session_start(); ?>
        <?php if (isset($_SESSION['success_message']) &&
!empty($_SESSION['success_message'])) { ?>
          <div class="success-message" style="margin-bottom: 20px;font-size: 20px;color:
green;"><?php echo $_SESSION['success_message']; ?></div>
```

```
<?php
unset($_SESSION['success_message']);
}
?>
```

Data Dictionary



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incometax_system

bank_account

Column	Type	Null	Default	Links to	Comments	Media type
Acc_no *(Primary)*	int(15)	No				
Bank	varchar(20)	Yes	*NULL*			
Acc_type	varchar(15)	Yes	*NULL*			
BIFSC	varchar(15)	Yes	*NULL*			
taxid	int(15)	Yes	*NULL*	my_profile -> taxid		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	Acc_no	0	A	No	
fk_to_taxsid	BTREE	No	No	taxid	0	A	Yes	

document

Column	Type	Null	Default	Links to	Comments	Media type
Doc_id *(Primary)*	int(10)	No				
Doc_type	varchar(20)	Yes	*NULL*			
Status	varchar(15)	Yes	*NULL*			

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	Doc_id	0	A	No	

login

Column	Type	Null	Default	Links to	Comments	Media type
User_id	int(10)	Yes	*NULL*	registration -> User_id		
Password	varchar(10)	Yes	*NULL*			

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
fk_to_User_id	BTREE	No	No	User_id	0	A	Yes	

my_profile

Column	Type	Null	Default	Links to	Comments	Media type

localhost/phpmyadmin/index.php?route=/database/data-dictionary&db=incometax_system&goto=index.php%3Froute%3D%2Fdatabase%2Fstruc... 1/3

taxid *(Primary)*	int(15)	No				
Fname	varchar(10)	Yes	*NULL*			
Mname	varchar(10)	Yes	*NULL*			
Lname	varchar(10)	Yes	*NULL*			
Gender	char(5)	Yes	*NULL*			
DOB	date	Yes	*NULL*			
Address	varchar(20)	Yes	*NULL*			
City	varchar(15)	Yes	*NULL*			
Docid	int(10)	Yes	*NULL*	document -> Doc_id		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	taxid	0	A	No	
fk_to_Docid	BTREE	No	No	Docid	0	A	Yes	

payment

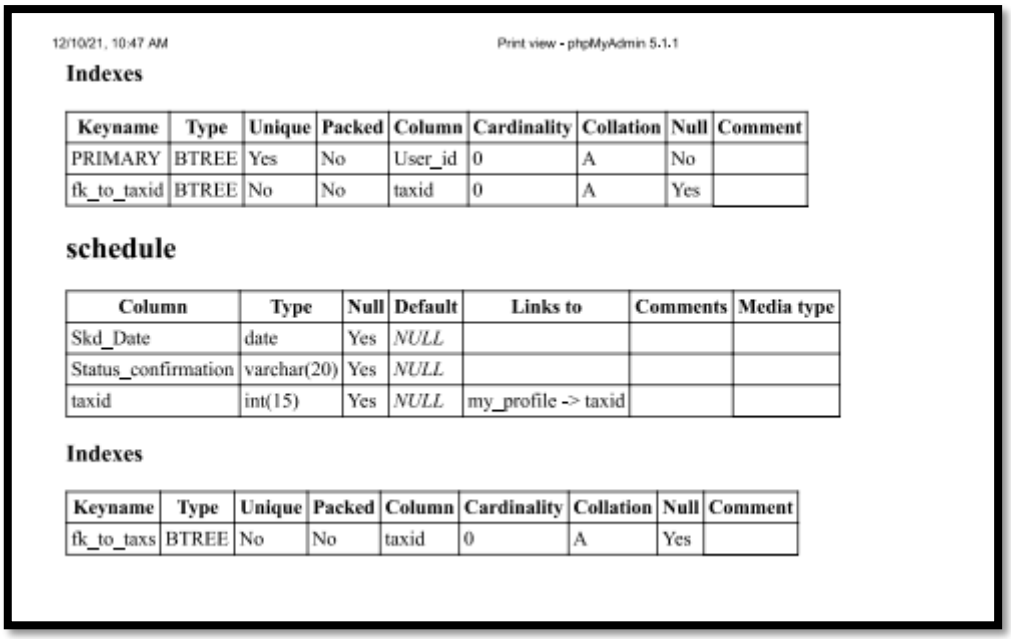
Column	Type	Null	Default	Links to	Comments	Media type
CIN *(Primary)*	int(15)	No				
Bank	varchar(20)	Yes	*NULL*			
Pay_date	date	Yes	*NULL*			
Amount	int(10)	Yes	*NULL*			
Acc_no	int(15)	Yes	*NULL*	bank_account -> Acc_no		
taxid	int(15)	Yes	*NULL*	my_profile -> taxid		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	CIN	0	A	No	
fk_to_accno	BTREE	No	No	Acc_no	0	A	Yes	
fk_to_tax	BTREE	No	No	taxid	0	A	Yes	

registration

Column	Type	Null	Default	Links to	Comments	Media type
User_id *(Primary)*	int(10)	No				
taxid	int(15)	Yes	*NULL*	my_profile -> taxid		
Phone_no	int(10)	Yes	*NULL*			
Fname	varchar(10)	Yes	*NULL*			
Mname	varchar(10)	Yes	*NULL*			
Lname	varchar(10)	Yes	*NULL*			
Password	varchar(10)	Yes	*NULL*			



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Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
PRIMARY	BTREE	Yes	No	User_id	0	A	No	
fk_to_taxid	BTREE	No	No	taxid	0	A	Yes	

schedule

Column	Type	Null	Default	Links to	Comments	Media type
Skd_Date	date	Yes	*NULL*			
Status_confirmation	varchar(20)	Yes	*NULL*			
taxid	int(15)	Yes	*NULL*	my_profile -> taxid		

Indexes

Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
fk_to_taxs	BTREE	No	No	taxid	0	A	Yes	

Result

This proposed system will benefit the government as it would have the ability to maintain the data more effectively and the tax organization is seen as more transparent in carrying out its duties. The tax payer will be more receptive to taxation as the whole process is flexible and it doesn’trequire visits to tax office. This system looks at how tax payment process can be encouraged through simplification and increased efficiency in payment processing. Individuals can depend on this platform to carry out their duties as citizens