

TAX HELP: AN INCOME TAX MANAGEMENT SYSTEM

REPORT ON PACKAGE

SUBMITTED BY

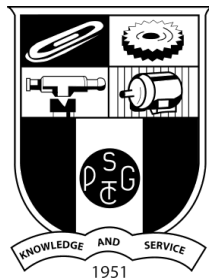
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ABSTRACT

This project was developed as a package for the subject “Database Design”. We have developed an application similar to an income tax management system. The idea behind this project is to create an application that is more user-friendly. It is to ease up the task of users filling large income tax forms. We have used the concept of Relational Database modelling and have provided a web based UI made with the help of HTML and CSS languages. The database used to store the data is MySQL and PHP has been used for server-scripting.

1.1 INTRODUCTION

TaxHelp is a free web based application that helps users to fill their income tax forms online itself. Traditionally, people used to print their tax forms and fill them up manually. TaxHelp is an e-filing portal that users now can use to fill up their forms. In this project, we have taken the ITR1 income tax form as a reference and have developed our application based on that. Apart from this, we also try to extract useful information from that data stored into our database. We implement these queries to show how they can be used to extract insights from our data.

1.2 RELATIONAL DATABASE MODELLING

We use a database to store the forms filled and information about each user. In order to efficiently implement the database, we try to understand what

are the different types of information we receive and the relationships between them. Relational database modelling techniques have been used to achieve the same.

LOGIN TABLE

PAN	Password
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- PAN denotes the PAN number of the user. It is the primary key.
- Password denotes the password for the user's account.

GENERAL INFORMATION TABLE

PAN	Name	DOB	Aadhaar Number	Mobile Number	Email ID
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	Flat / Door No	Building Name	Road / Street No	Area	City	State	Country	PIN
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	Nature of their employment	Filed u/s	Filed in response to notice u/s	Receipt Number	Date Of Filing Return	Unique Number	Date Of Notice
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NOTE : ALL THE ABOVE TABLES ARE ACTUALLY ONE SINGLE TABLE. THEY HAVE BEEN DIVIDED FOR BETTER ILLUSTRATION PURPOSES.

- PAN denotes the PAN number. It is foreign key imported from the LOGIN table.

- Name denotes the full name of the user.
- DOB denotes the date of birth of the user (Format - dd/mm/yyyy).
- Aadhaar Number denotes the Aadhaar Number or Aadhaar Enrollment ID of the user.
- Mobile Number denotes the contact number of the user.
- Email ID denotes the valid mail ID of the user.
- Flat / Door Number denotes the flat or house number.
- Building Name denotes the name of the Premises or Building or Apartment or Village.
- Road/ Street Number denotes the name of the Post office or Road or Street in which the house is situated.
- Area denotes the name of area or locality in which the house is situated.
- City denotes the name of town or city or district in which the house is situated.
- State denotes the name of the state they reside in.
- Country denotes the name of the country they reside in.
- PIN denotes the PIN Code of the nearest post office located near their neighbourhood.
- Nature of employment specifies the type of job the user is employed with.
- Filed u/s indicates the section under which the return is being filed.
- Filed in response to notice u/s is used instead of the previous one, in case the return is being filed in response to a statutory notice.
- If it is a revised return, or a return being filed in response to notice ;
‘Receipt number’ and ‘Date of filing original return’ are used to store the acknowledgement number and date of filing of the original return.

- In case the return is being filed in response to a statutory notice, the Unique number and date of the relevant statutory Notice or condonation order is stored in the ‘Unique Number’ and ‘Date of Notice’ respectively.

NOTE : THE INFORMATION OF THE BELOW TABLES CAN BE UNDERSTOOD BY REFERRING TO THE DOCUMENTS MENTIONED IN THE “BIBLIOGRAPHY SECTION” BELOW. THEY ARE NOT MENTIONED HERE.

INCOME FROM SALARY TABLE

PAN	Salary as per section 17(1)	Value of perquisites as per section 17(2)	Profits in lieu of salary as per section 17(3)	Gross Salary
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Allowance 1	Allowance 2	Allowance 3	Allowance 4	Allowance 5
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Allowance 6	Allowance 7	Allowance 8	Allowance 9	Allowance 10
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Allowance 11	Allowance 12	Allowance 13	Allowance 14
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Net Salary	Deductions u/s 16	Standard Deduction u/s 16	Entertainment allowance u/s 16	Professional tax u/s 16	Income chargeable under the Head ‘Salaries’
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NOTE : ALL THE ABOVE TABLES ARE ACTUALLY ONE SINGLE TABLE. THEY HAVE BEEN DIVIDED FOR BETTER ILLUSTRATION PURPOSES.

INCOME FROM HOUSE PROPERTY TABLE

PAN	Type of House Property	Gross rent received/ receivable/ lettable value during the year
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Tax paid to local authorities	Annual Value	30% of Annual Value
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Interest payable on borrowed capital	Arrears/Unrealized Rent received during the year Less 30%	Income chargeable under the head 'House Property'
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NOTE : ALL THE ABOVE TABLES ARE ACTUALLY ONE SINGLE TABLE. THEY HAVE BEEN DIVIDED FOR BETTER ILLUSTRATION PURPOSES.

INCOME FROM OTHER SOURCES

PAN	Interest from Savings Bank Account	Interest from Deposit	Interest from Income Tax Refund	Family pension	Any Other Income	Deduction in case of family pension
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DEDUCTIONS TABLE

PAN	80C	80CC C	80CC D1	80CC D1B	80CC D2	80CC G	80D	80DD	80DD B
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80E	80EE	80G	80GG	80GG A	80GG C	80TT A	80TT B	80U	Total Dedu ctions
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Total Inco me	Exem ption Inco me	SEC 1010 BC	SEC 1010 D	SEC 1011	SEC 1012	SEC 1012 A	SEC 1012 B	SEC 1013	SEC1 016
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SEC 1017	SEC 1017A	SEC 1018	SEC 1019	SEC 1026	SEC 1026 AAA	SEC 1034	SEC 1035	Any Other
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***NOTE : ALL THE ABOVE TABLES ARE ACTUALLY ONE SINGLE
TABLE. THEY HAVE BEEN DIVIDED FOR BETTER ILLUSTRATION
PURPOSES.***

PAN	Savings Bank	Deposit	IncTaxR efund	Pension	Others	Less
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TOTAL TAX PAYABLE TABLE

PAN	Tax payable on total income	Rebate u/s 87A	Tax after Rebate	Health and Education Cess @4%
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Total Tax & Cess	Relief u/s 89(1)	Interest u/s 234A	Interest u/s 234B	Interest u/s 234C
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Fee u/s 234F	Total Taxes Paid			
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NOTE : ALL THE ABOVE TABLES ARE ACTUALLY ONE SINGLE TABLE. THEY HAVE BEEN DIVIDED FOR BETTER ILLUSTRATION PURPOSES.

BANK ACCOUNT DETAILS

PAN	IFS Code of the bank	Name of the Bank	Account Number
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1.3 TOOLS AND TECHNOLOGY

In this project, we have made use of the following tools for various purposes. The XAMPP software package was used as it had both PHP and MySQL in built.

MySQL for Database Storage

MySQL is a relational database management system based on the Structured Query Language, which is the popular language for accessing and managing the records in the database. MySQL is open-source and free software under the GNU license. It is very easy to use and simplifies our tasks to a great extent.

PHP for Server Side Scripting

PHP is an open-source, interpreted, and object-oriented scripting language that can be executed at the server-side. PHP is well suited for web development. Therefore, we have made use of it to develop the server-side applications. These applications interact with the HTML web page and provide an interface between the database and web pages.

HTML and CSS for UI

HTML stands for Hyper Text Markup Language. It is used to easily create static web pages. All the forms we have provided in the interface are done with the help of HTML. CSS was used to style our web pages and portray a much better appealing UI for the users.

1.4 WORKFLOW

We categorised the different steps involved in building this application into different categories called “Phases”.

PHASE 1 :

Exploring and understanding of the types of data involved in the forms.

PHASE 2 :

Development of ER diagrams for the data collected in Phase 1.
Identification of primary key, foreign key and redundant information was done.

PHASE 3 :

Database was created in MySQL. Required tables with the appropriate attributes were also created.

PHASE 4 :

Static web pages were created to provide the user interface. Styling was done then, using CSS language.

PHASE 5 :

PHP applications were developed to provide a communication between the database and web-based forms. The information collected in the UI was added into the database with the help of these PHP scripts.

PHASE 6 :

Different types of functions were developed such as calculation of the net payable tax and provision for viewing your submitted income tax forms.

PHASE 7 :

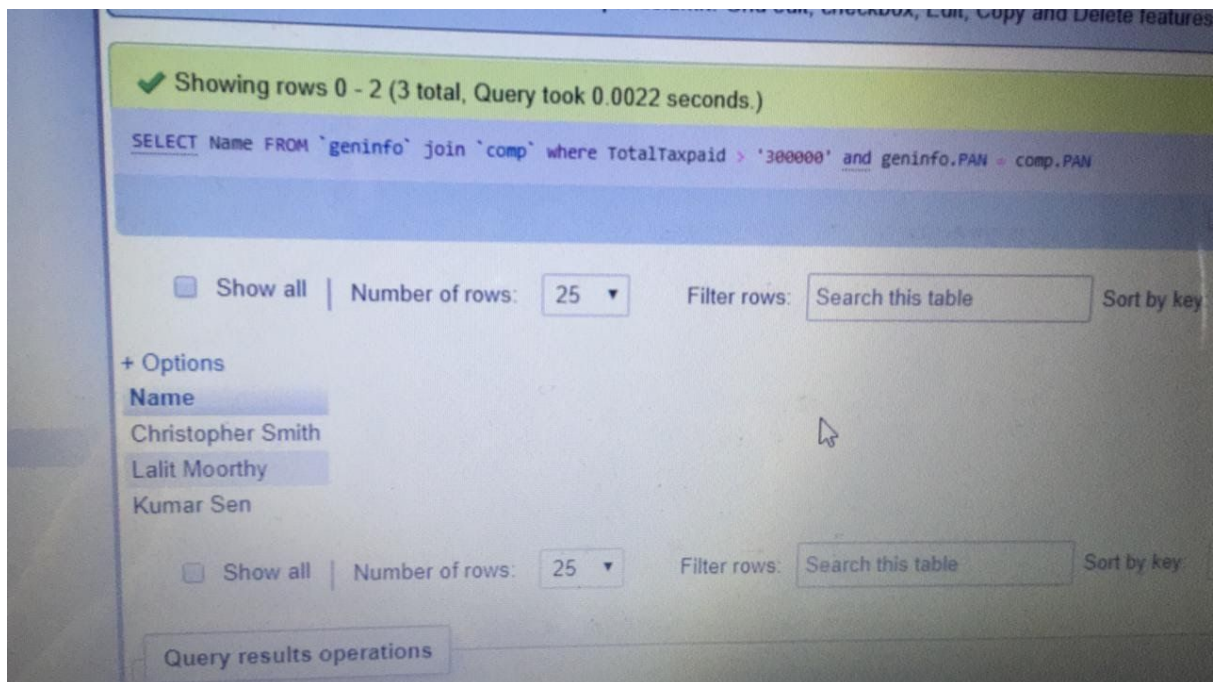
From the data stored in the database, we execute a few SQL queries and try to gain some useful information from them. This is done to demonstrate that we are capable of executing efficient SQL queries.

1.5 SQL QUERIES AND RESULTS

We tested our database by populating it with some initial data and running few SQL queries against it. The queries we executed have been mentioned below :

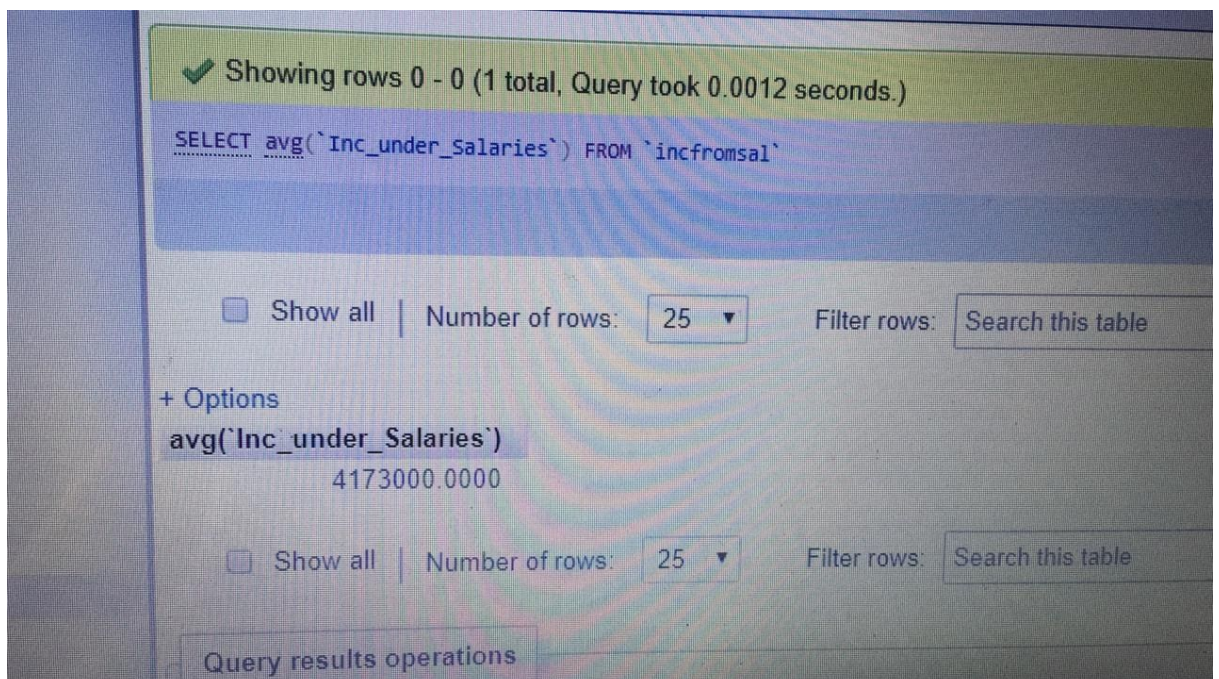
- **Display the names of the people who pay more than 3L as Tax**

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SELECT Name FROM geninfo join comp where TotalTaxpaid >
'300000' and geninfo.PAN = comp.PAN;
```



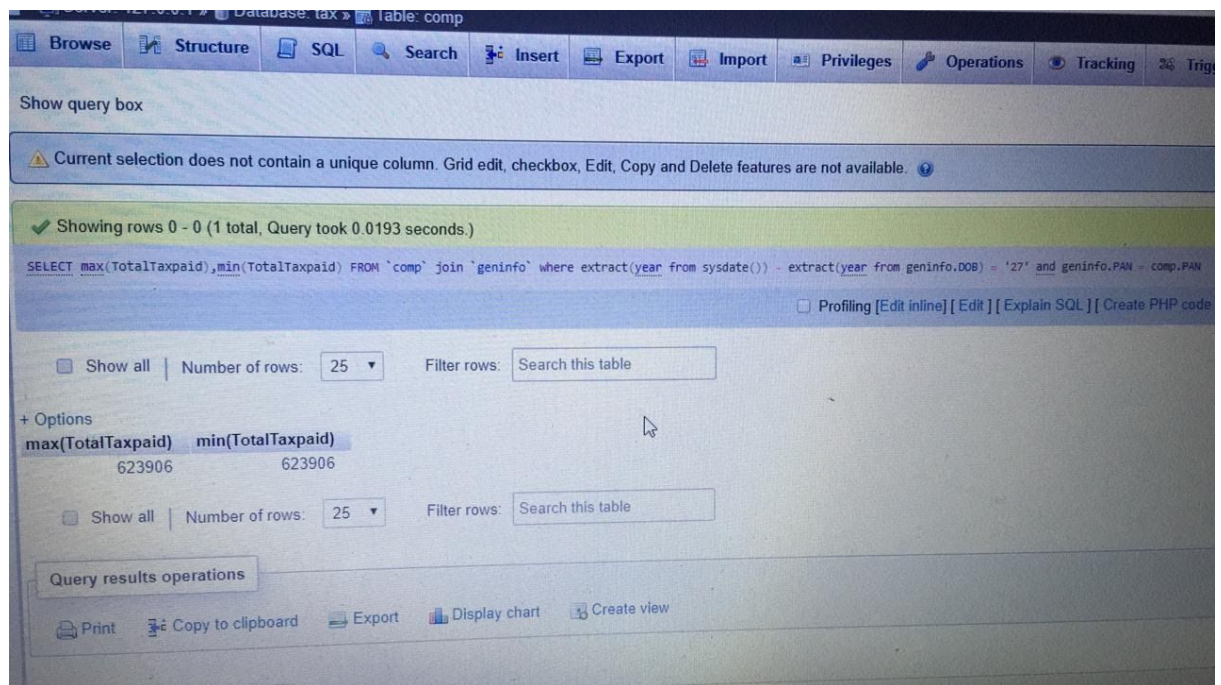
- Find and display the average salary an individual earns over the year

SELECT avg(Inc_under_Salaries) FROM incfromsal;



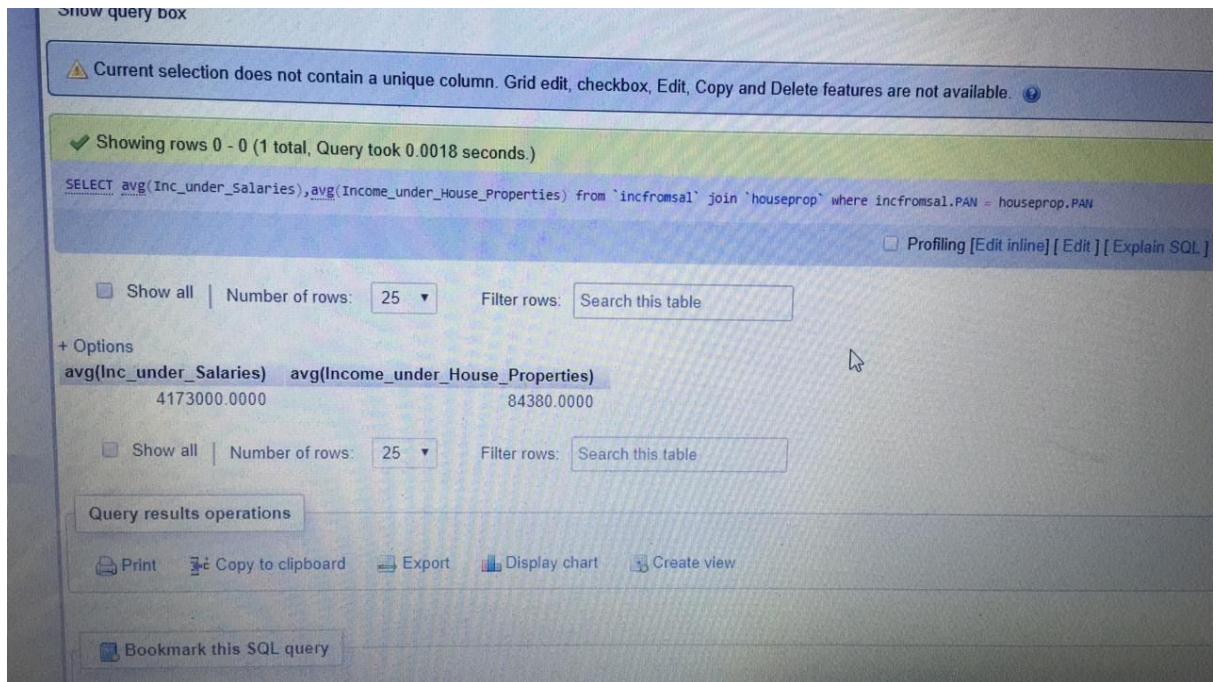
- Given a particular age(in this case 27), what is the maximum and minimum amount of tax they pay

SELECT max(TotalTaxpaid), min(TotalTaxpaid) FROM comp join geninfo where extract(year from sysdate()) - extract(year from geninfo.DOB) = '27' and geninfo.PAN = comp.PAN;



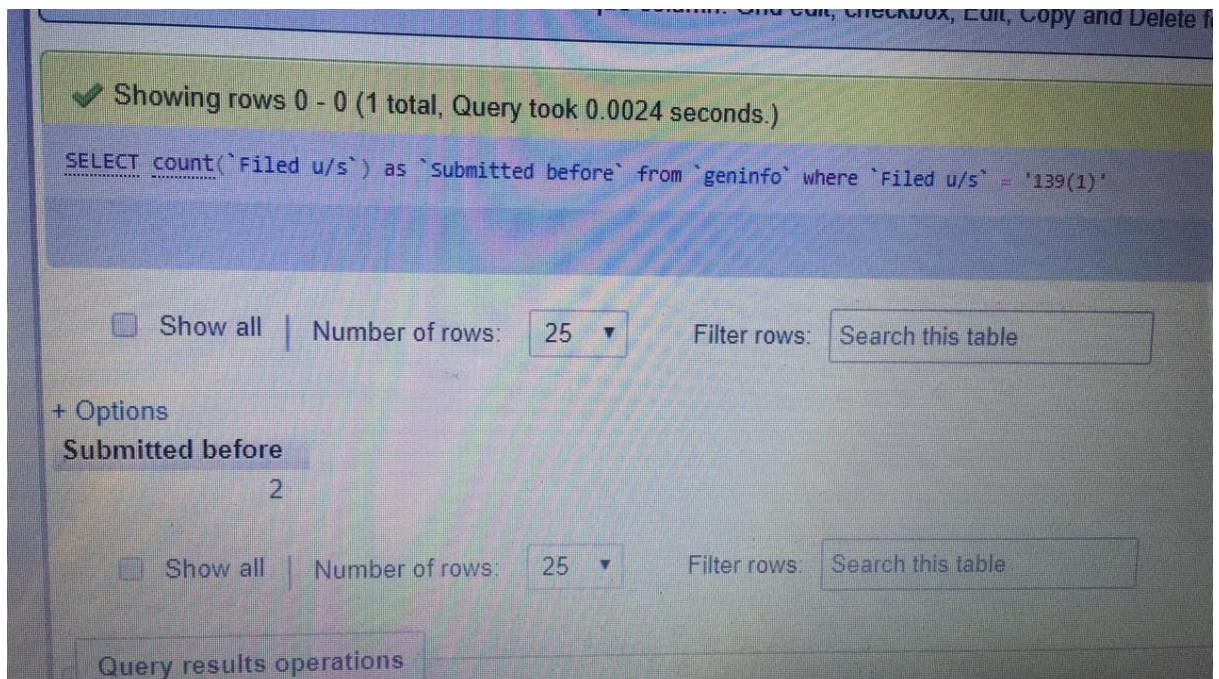
- Which factor majorly contributes to the total income a person earns? Find out.

SELECT avg(Inc_under_Salaries), avg(Income_under_House_Properties) from incfromsal join houseprop where incfromsal.PAN = houseprop.PAN;

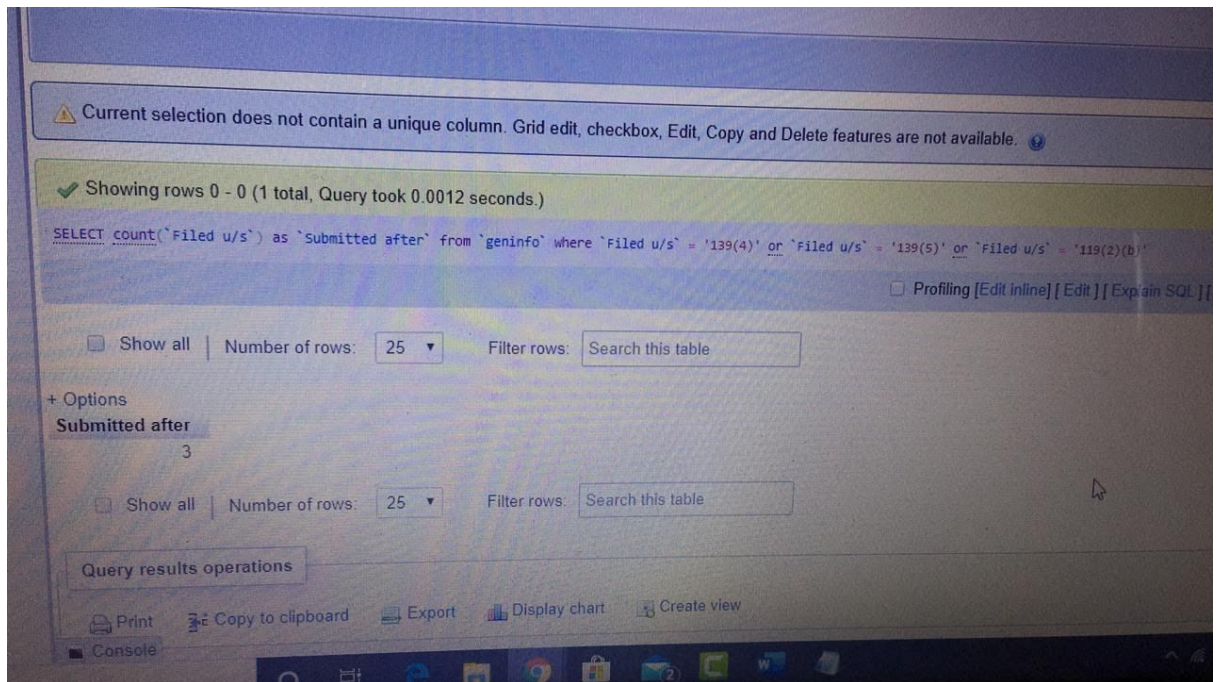


- How many people have submitted before the prescribed date and how many haven't?

SELECT count('Filed u/s') as 'Submitted before' from 'geninfo' where 'Filed u/s' = '139(1)';

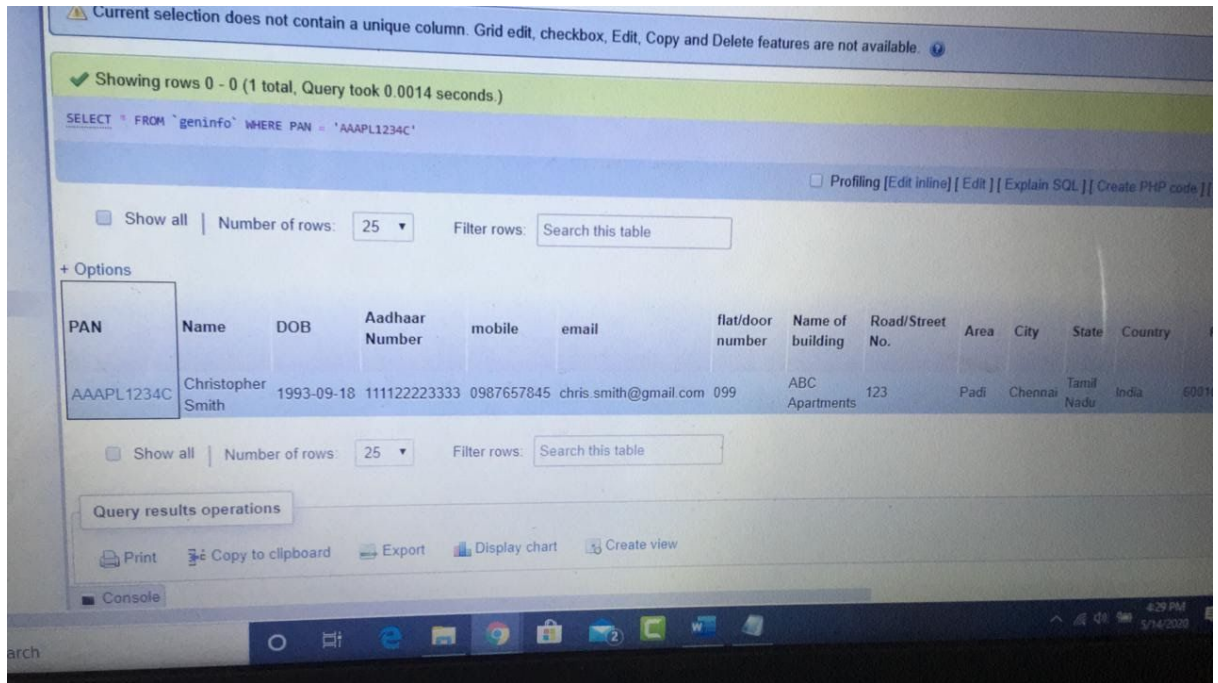


SELECT count('Filed u/s') as 'Submitted after' from geninfo where 'Filed u/s' = '139(4)' or 'Filed u/s' = '139(5)' or 'Filed u/s' = '119(2)(b)';



- **Display the details of the form submitted by the user with PAN 'AAAPL1234C'**

*SELECT * FROM geninfo WHERE PAN = 'AAAPL1234C';*



1.6 CONCLUSION

In this project, we have thus demonstrated the usefulness of relational database models in the real world. Relational models help us to easily visualise our tables and our task of table creation becomes easier. UI creation has also made our task much more simpler and makes use of the database in an effective manner. Overall, we have provided a project with the workings of different concepts.

1.7 BIBLIOGRAPHY

- https://www.incometaxindiaefiling.gov.in/eFiling/Portal/StaticPDF/Instructions_ITR_1_AY_2019-20.pdf
- Fundamentals Of Database Systems, Fifth Edition by Ramez Elmasri and Shamkant B. Navathe

