

# Investigatory Salary Management System

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**Abstract-** This system is for employee or businessman related system. Basically in this system we are doing calculation of salary on the basis of monthly and yearly. So after then the system having another module which is depend upon salary module that module is expense module. In this module user enter their expense which is done by monthly. And then all expense calculate and if user want to generate report then report module is worked. In that we will used report module to generate report and it shows in graph as well as in pdf format. This is over all concept of our system.

## I. INTRODUCTION

“Investigatory Salary Management(ISM)” system is a python based project. It is very simple, flexible and user friendly management software. That takes care of all of your requirements relating to accounting and management of employees’ salary. This system is for employee or businessman related systems. Basically in this system we are doing calculations of salary on the basis of monthly and yearly. So after that the system has an other module which is dependent upon the salary module. That module is an expense module. In this module users enter their expenses which are done monthly. All expenses are calculated and if the user wants to generate a report then the report module is worked. In that we will use a report module to generate reports and it shows in graph as well as in pdf format. This is the whole concept of our system.

## II. LITERATURE REVIEW

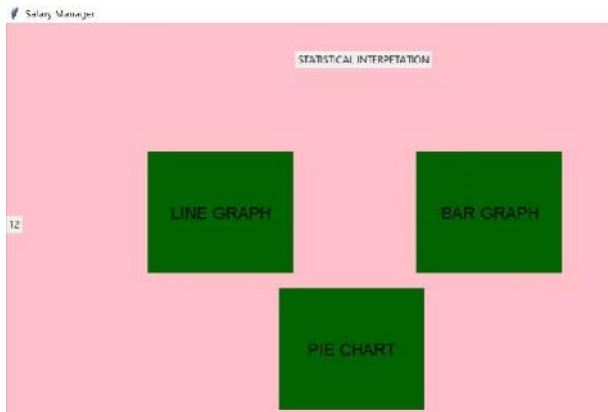
Python is a general-purpose programming language that’s powerful yet easy to read, making it a great first language to learn. From web development to machine learning to data science python can do it all.

Tkinter is a library for Graphical User Interface(GUI) programming in python. All the graphical work in this program have been done using this module only. Module mysql.connector is used for the connection of Python program with mysql database. So that We can store all the data related to the application can be stored in the database in a secured manner. Package matplotlib and its module is used

for creating the graphs and emerge them with the tkinter window using Figure, Image and Canvas function.

PIL is the Python Imaging Library which provides the python interpreter with image editing capabilities. Module numpy is used for storing data in a uniform way so that it become easy extract and use them with their index values. Module base64 is used here to encode and decode the data stored in the database, so that any outsider cannot access or understand the password stored in the mysql database.

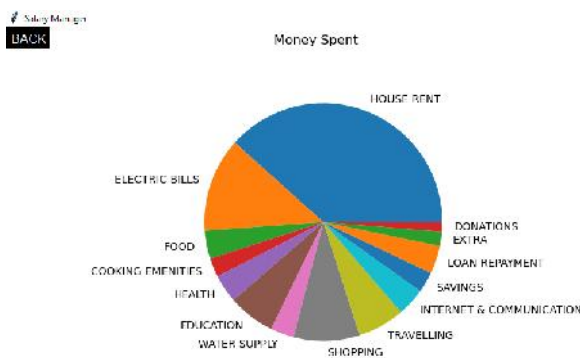
pie\_graphical directed from the statt frame. Here using matplotlib and pyplot, We have plotted the data in format of pie graph. For this We have used canvas and figure function from tkinter and matplotlib respectively. At first We have created a figure and then the data was plotted inside the line graph. After that the image was placed inside the canvas and then on main frame of the window. In the same way like the line graph & and bar graph.



bar\_graphical() is directed from the statt frame. Here using matplotlib and pyplot, We have plotted the data in format of bar graph. For this We have used canvas and figure function fromtkinter and matplotlib respectively. At first We have created a figure and then the data was plotted inside the line graph. After that the image was placed inside the canvas and then on main frame of the window.

The employee is hired by the employer after an application and interview process results in his or her selection as an employee. Employees play the most important roles in business where it can determine the success stage of a company. It is accessible anywhere in the world as long as there is an Internet connection.” Basically web-based also known web application, where is it convenient to the users, can log on to web-based system through the Internet using a web browser. Gaming is a part of the creative industry that provides numerus opportunities to those who are passionate about coding and animation their own imagination.

Although manual system is relatively low cost but “it is time-consuming to access data held in a manual filing system.”. Since, the paper and document is store in the filling cabinet, as task or work amount increase on paperwork this will consume a lot of space in filling cabinet. Furthermore, if the task of a manager increase, it can lead to cause data miss-filling because too much of task to be perform. In web-based system, it can eliminate paper costs or reduce paperwork as daily task can be done by using computer and internet technology.

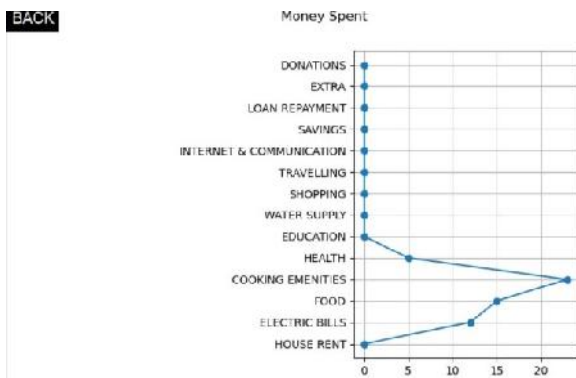


This therefore, can increase the effectiveness of daily task and information can be manageable. In addition information maintaining and updating can be more systematic. **Investigatory Salary Management(ISM)**system is a python based project. It is very simple, flexible and user friendly management software. That takes care of all of your requirements relating to accounting and management of employees’ salary.

**II. STUDY FINDINGS**

line\_graphical is directed from the statt frame. Here using matplotlib and pyplot, We have plotted the data in format of line graph. For this We have used canvas and figure function from tkinter and matplotlib respectively. At first We have created a figure and then the data was plotted inside the line graph. After that the image was placed inside the canvas and then on main frame of the window.

In this, one has to test whether the system can be developed using existing technology or not. It Is evident that necessary hardware and software are available for development and implementation of the proposed system. We acquired the technical knowledge of working in languages, and then only we have started designing our project. A system has been built by concentrating on the graphical user interface concepts, the application can also be handled very easily with novice users. The overall time that a user needs to get trained is less than 15 minutes. The system has been added with features of menu device and button interaction methods, which makes him the master as he starts working through the environment. As the software that was used as developing this application are very economical and readily available is the market, the only time that is lost by the customer is just installation time. Technical feasibility performs following tasks.



Analyzes the technical skills and capabilities of the software development team members. In this, one has to test whether the system can be developed using existing technology or not. It is evident that necessary hardware and software.

Determines whether the relevant technology is stable and established. The system has been added with features of menu device and button interaction methods, which makes him the master as he starts working through the environment.

Ascertains that the technology chosen for software development has a large number of users so that they can be consulted when problems arise or improvements are required. It mentions computers with new configuration requirements of the proposed system. It mentions new software requirements of the proposed system.

Projects are initiated with a specific deadline. We need to evaluate whether the deadlines are or desirable. Time is one of the critical factors in the development of any system but this kind of feasibility is hardly perfect in any system.

### III. STRUCTURAL ANALYSIS RULE ENGINE

Rule-based expert system appears to the developer an opportunity to solve problems, this is the rules engine. Rules engine by the expert system inference engine from the development, which is an embedded component in the application, the business decision-making rules from the separation of application code and the semantics of the module using the predefined rules of writing business decisions. To accept data entry, business rules interpretation, and to make business decisions based on business rules.

In today's enterprise software is more popular in the rules engine and a variety of business process management (BPM) system. Such tools are committed to one thing: that a clear separation of business logic, and by their own maintenance, and is ready to invoke the existing application. Even companies with information systems such as ERP, business rules written into the program logic of most of the code, coupled with application code. When business needs change and when it can not respond quickly make the appropriate changes, and try to modify the existing code, and low efficiency, cost significantly, thereby affecting the enterprise information construction

Knowledge Management Knowledge Base for a special kind of database so that the relevant domain knowledge acquisition, consolidation, and extraction. Inference engine consists of three parts: Rule Interpreter,

Pattern Matcher and Agenda. Pattern matcher to perform from the Knowledge Base to find out the rules and write the agenda; agenda to give priority to these rules determine the order of execution; rules interpreter to run the implementation of these rules and the output results. There are two inference engine reasoning, deductive and inductive. Deduction rules applied by the facts to a conclusion; induction is based on the assumption that the definition, find the facts consistent with the hypothesis.

Business Rules Engine rules must be explained before you can run the business rules. Actually a high performance rules engine can be viewed as a special interpreter, including if-then operation of the business object in business rules to run, and then return to operating results and the modified business objects. The world's leading business rules engine products are basically commercial use the Rete algorithm, and to support the deductive and inductive. By the rules, engine developed from the rules-based system, knowledge base system is a branch of artificial intelligence areas, which is consists of three parts: Knowledge Base, Working Memory and Inference Engine. Structure is as follows:

- (1) The initial data input to the work of memory;
- (2) The device will use pattern matching rules in the knowledge base and data comparison;
- (3) If the enforcement of rules of conflict, which also activates a number of rules, the rules of the conflict into the conflict set;
- (4) Resolution of the conflict, the rules will be activated in sequence into the agenda;
- (5) The implementation of the rules of the agenda;
- (6) Business Rules execution order is based on the implementation of the priority agenda to decide, when the engine enforcing rules, as a result of the memory data objects because of execution rules changed so that the implementation of the agenda of the business rules dynamic execution instances will occur Changes that may increase may be reduced. Thus a kind of "dynamic" rule execution chain, it is forming the so-called rules of inference mechanism

### IV. CONCLUSION

The Internet has become a major resource in modern business, thus computerized salary management system has gained significance not only from the entrepreneur's but also from the employee's point of view.

Automated salary management systems enable the employer to process its payroll through a computerized system. A manual payroll system requires that the payroll be processed by hand and is therefore a considerably slower

procedure than an automated system. The former makes payroll processing simpler, and reduces errors, which are more likely with the manual system. Hourly workers are paid according to hours worked during the pay period. The employer uses a time-keeping system to track hours and pay hourly employees accordingly. It is critical, therefore, that each employee's time is computed accurately. Many employers use a time clock to track work hours. A manual salary management system requires computing the time clock data by hand; this increases the likelihood of mistakes. Payroll seems simple at its core, but becomes complicated because of the various deductions that come into play. Payroll seems simple at its core, but becomes complicated because of the various deductions that come in to play. Employers must withhold taxes from each paycheck and make sure accurate funds are paid to the correct government agency.

## V. ACKNOWLEDGMENT

We are the student of BE Computer. Here by we express our thanks to our project guide for allowing us to do the project **Investigatory Salary Management System**. This project work has been the most exciting part of our learning experience which would be an asset for our future carrier. No system is created entirely by an individual. Proper organization of concept and analysis of the system. We would especially like to thank our guide and mentor **Prof. Ajaykumar T. Shah**, who constantly guided us in developing, pushing us to search for more answers to her numerous questions. This simulated many valuable thoughts and motivated us to constantly revise and reshape the report. We are grateful to many classmates who contributed their suggestions. Our close and daily colleagues have the greatest influence and our deepest appreciation. Their hard work and examples push us to limits of our capability and encourage us daily.

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