NEW HORIZON
COLLEGE OF ENGINEERING
New Horizon Knowledge Park, Ring Road, Marathalli
Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC
Accredited by NAAC with 'A' Grade, Accredited by NBA

SPUR

A PAYROLL ANALYZER

By,
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1NH17CS712

Objective of Course

- To understand and apply the gain theoretical knowledge of Java language to model the real world applications using Object Oriented Programming concepts

- To develop applications using inheritance.

- To learn and implement the syntax and features of exception handling and multithreading

- To understand how to develop and implement swing applications.

- To analyse and apply the JDBC concepts and create applications based on database.

What is SPUR ?

An HRMS Java Application developed for performing the analysis of a payroll of a company over a period of time efficiently, to improve the profits of an organization. The live dashboard gives the latest information of the payroll details, which can help plan a future course.

Methodology

- The initial step is to analyze the problem statement of the project and come up with ideas to implement it.
- Create a database in WAMP that can store all the information from the front end into the JDBC.
- Various windows in front end is created to fulfil the required functionalities that has to be carried out by the project.
- Connect each UI page to the JDBC. The front-end will act as the intermediate and the user. Setup action-listers in order to perform the certain actions.
- Perform the calculations in the back-end and the store it in a table. Retrieve those stored values on the front end as and when required.
- Use graph to do the analysis. Use a graph to pictorially represent the data store in the tables in the JDBC.

Employee Management

Employee management helps in increasing employee engagement and ultimately impact the growth of the organization .

An organization to handle payroll duties in house through a manual process could be time consuming while attempting to calculate everything correctly.

One miscalculation and the business owner could find themselves in legal or financial trouble. So SPUR could be solution for organizations as its payroll system.

ADD NEW EMPLOYEE

(+) Add Employee

EMPLOYEE ID :

EMPLOYEE NAME :   DESIGNATION : ○ Manager   ○ Analyst   ○ Salesman

BRANCH : ○ Kerala   ○ Goa   ○ Delhi   DEPARTMENT : --Select-- ▼

DATE OF JOINING :   ...

(+) Submit   (✕) Cancel

PERFORMANCE INFORMATION

EMPLOYEE ID : E4   🔍 Search

EMPLOYEE NAME : Jiman   DESIGNATION: Manager

DATE OF JOINING : 24-Jan-2019   DEPARTMENT: Research and Development

YEAR : 2019   RATING: |———————●——|

(+) Submit   (✕) Cancel

ATTENDANCE INFORMATION

EMPLOYEE ID : E10   🔍 Search

EMPLOYEE NAME : Ruby   DESIGNATION: Analyst

DATE OF JOINING : 20-Mar-2020   DEPARTMENT: Research and Development

DATE: 19-Apr-2020   ...   STATUS: ○ Present   ● Absent

(+) Submit   (✕) Cancel

BASIC SALARY

EMPLOYEE ID : E10   🔍 Search

EMPLOYEE NAME : Ruby   DESIGNATION: Analyst

DATE OF JOINING : 20-Mar-2020   DEPARTMENT: Research and Development

EFF. FROM : 02-Apr-2020   ...   VALUE: 200000

(+) Submit   (✕) Cancel

DEDUCTION INFORMATION

EMPLOYEE ID : E10   🔍 Search

EMPLOYEE NAME : Ruby   DESIGNATION: Analyst

DATE OF JOINING : 20-Mar-2020   DEPARTMENT: Research and Development

DEDUCTION TYPE : --Select--   DEDUCTION VALUE :

⊕ Submit   ⊗ Cancel

ALLOWANCE INFORMATION

EMPLOYEE ID : E10   🔍 Search

EMPLOYEE NAME : Ruby   DESIGNATION: Analyst

DATE OF JOINING : 20-Mar-2020   DEPARTMENT: Research and Development

ALLOWANCE TYPE : Dearness Allowance   ALLOWANCE VALUE : 500

⊕ Submit   ⊗ Cancel

BASIC SALARY

EMPLOYEE ID : E10   🔍 Search

EMPLOYEE NAME : Ruby   DESIGNATION: Analyst

DATE OF JOINING : 20-Mar-2020   DEPARTMENT: Research and Development

EFF. FROM : 02-Apr-2020   ...   VALUE: 200000

⊕ Submit   ⊗ Cancel

PAYSLIP INFORMATION

PAYSLIP OF THE   April   2020

EMPLOYEE ID : E3   Generate Payslip

PAYSLIP OF THE MONTH : April

NAME : Naomi   TOTAL ALLOWANCE : 1700.0

DESIGNATION : Salesman   TOTAL DEDUCTION : 2000.0

DEPARTMENT : Marketing   GROSS PAY : 91700.0

DATE OF JOINING : 13-Jan-2019   NET PAY : 89700.0
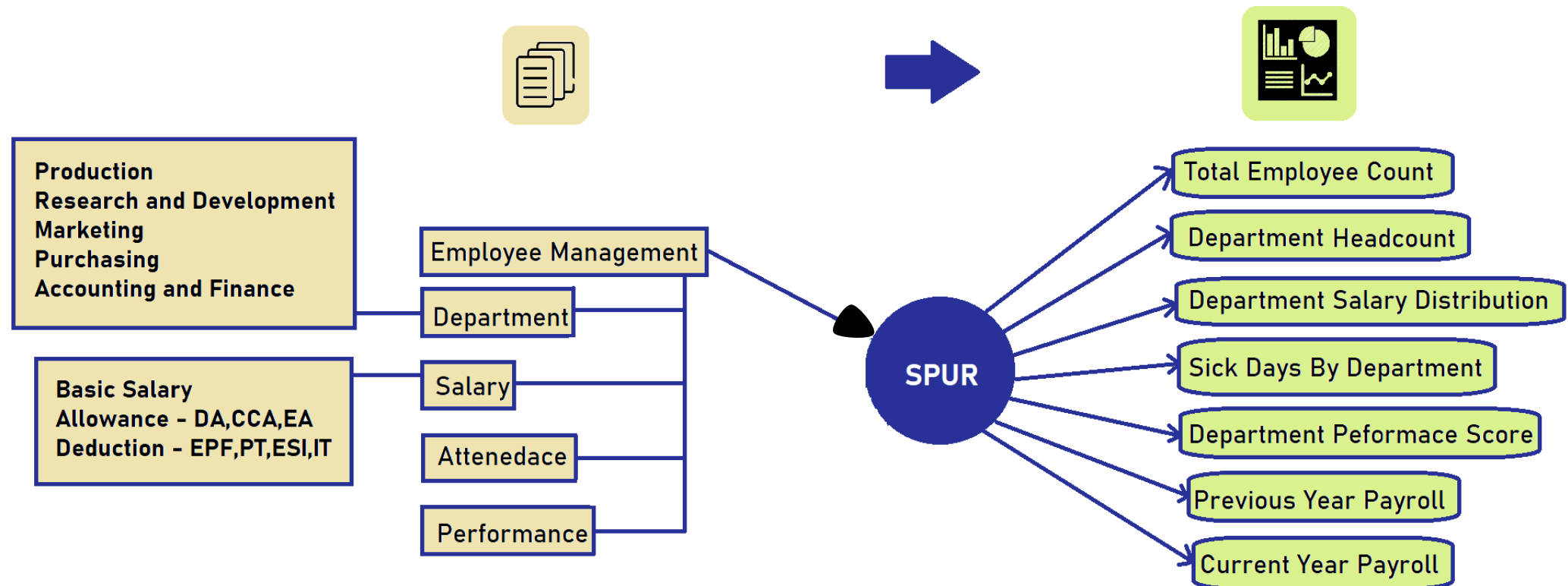
💾 Save Payslip   ⊗ Cancel

Employee Records

SPUR EMPLOYEE MASTER

⊕ Add New Employee

Window Snip

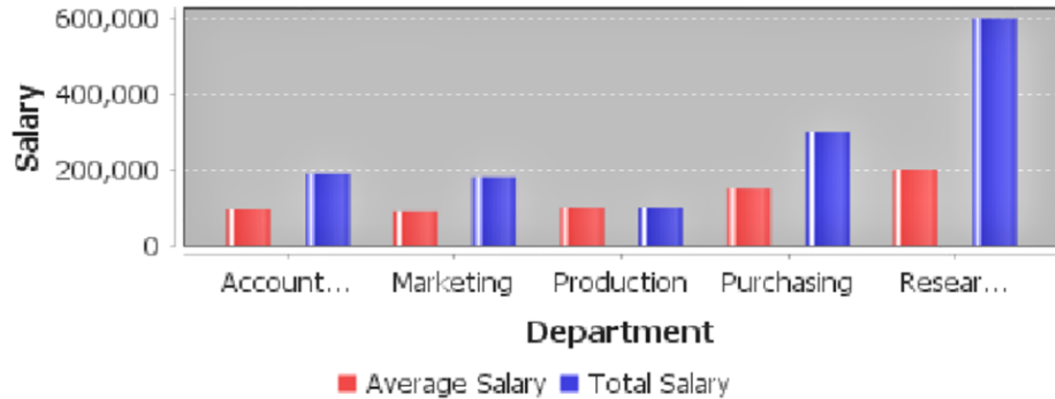| Seq	ID	Name	Designation	DOJ	Department	Branch
39	E1	Kim	Manager	14-Jan-2019	Production	Goa
40	E2	Mariku	Analyst	31-Jan-2019	Research and D...	Goa
41	E3	Naomi	Salesman	13-Jan-2019	Marketing	Delhi
42	E4	Jiman	Manager	24-Jan-2019	Research and D...	Bangaore
43	E5	Limo	Analyst	27-Jan-2020	Purchasing	Delhi
44	E6	Minoa	Salesman	10-Feb-2020	Marketing	Bangaore
45	E7	Yamin	Manager	14-Jan-2020	Accounting and ...	Goa
46	E8	Ormanda	Salesman	19-Jan-2020	Accounting and ...	Delhi
53	E9	Kenny	Manager	12-Feb-2020	Purchasing	Goa
66	E11	Kamasami	Manager	01-Jul-2020	Production	Kerala
65	E10	Kiya	Analyst	01-Jul-2020	Research and D...	Goa

Data Flow Diagram

LIVE DASHBOARD
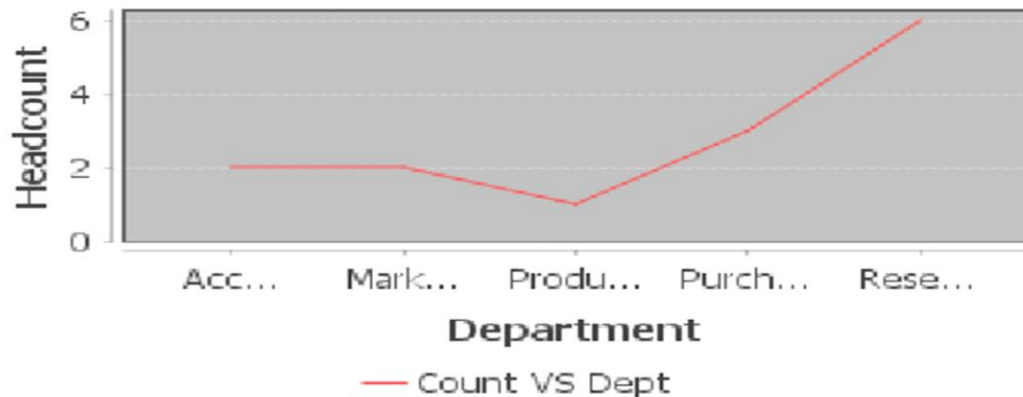
SALARY DISTRIBUTION

Organizations target employee pay at either the average rate to ensure employees receive competitive compensation while the business is still managing overall costs. However, knowing why average salaries differ is also important, as it may drive different compensation decisions in your organization.
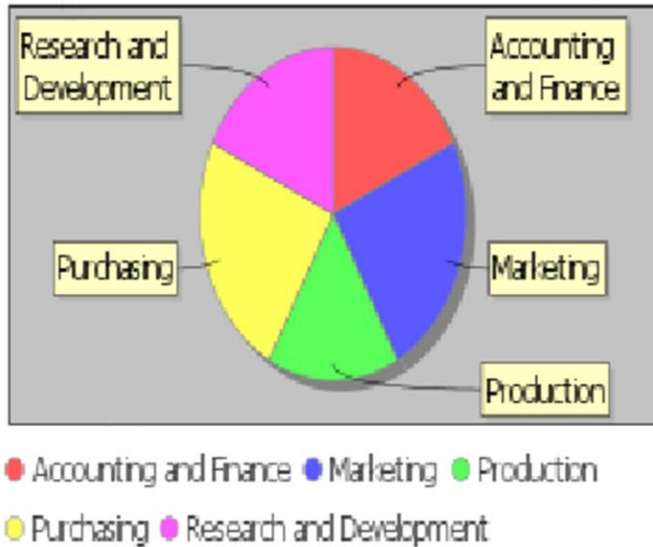

DEPARTMENT HEADCOUNT

Its essential to ensure an organization has the right number of people with the right skills in the right roles so the company can execute on its business strategy.
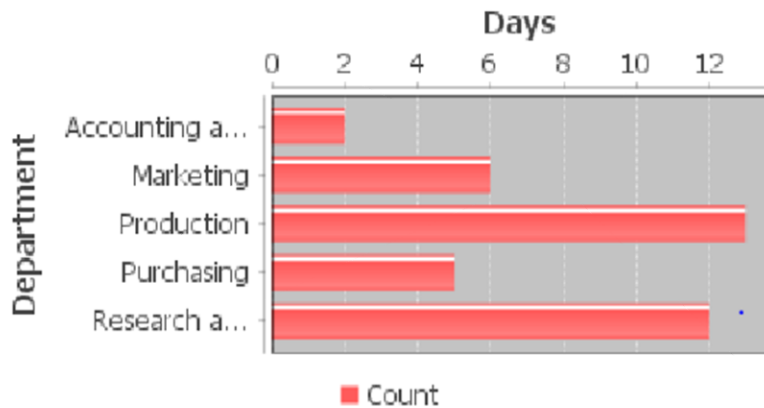
PERFORMANCE SCORE

Managers continually monitor the performance. Underperformance provides an early warning of potential problems and allowing managers to know when they must make adjustments to keep a business on track.
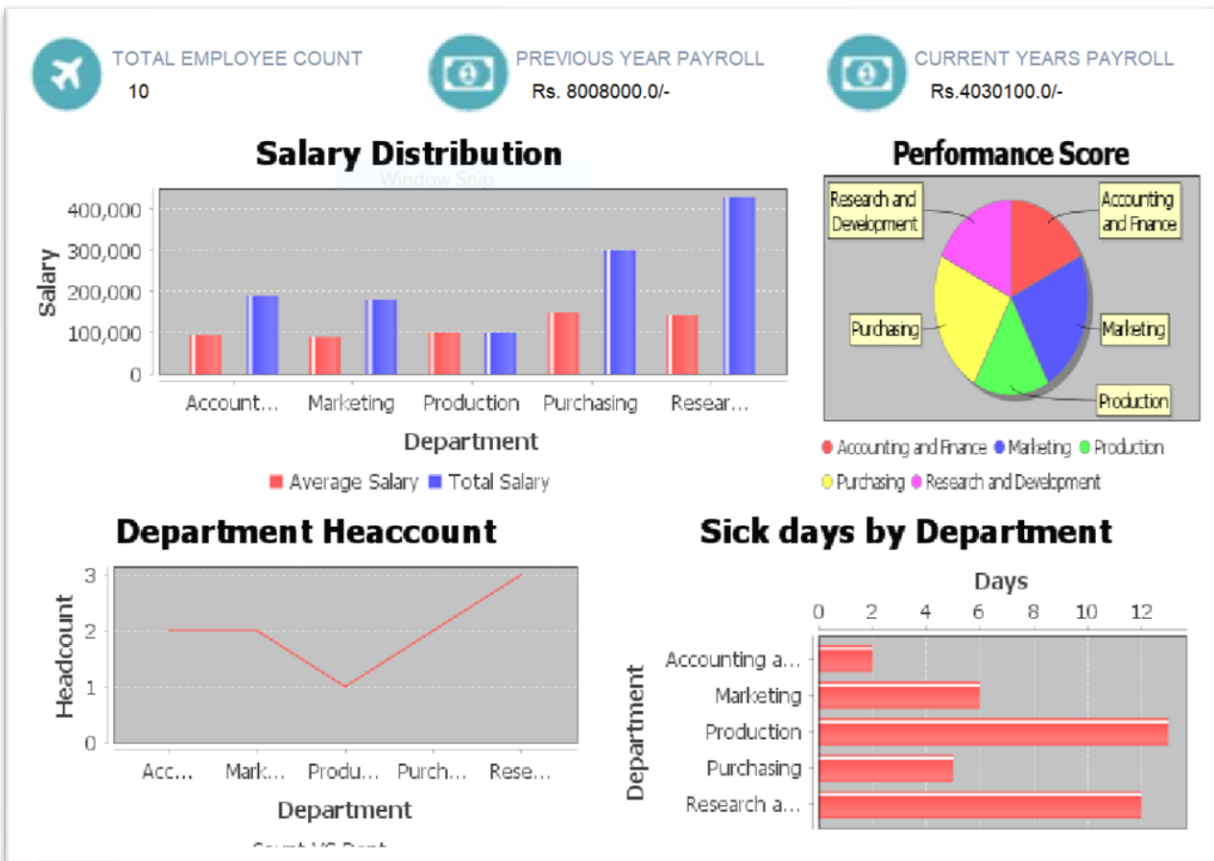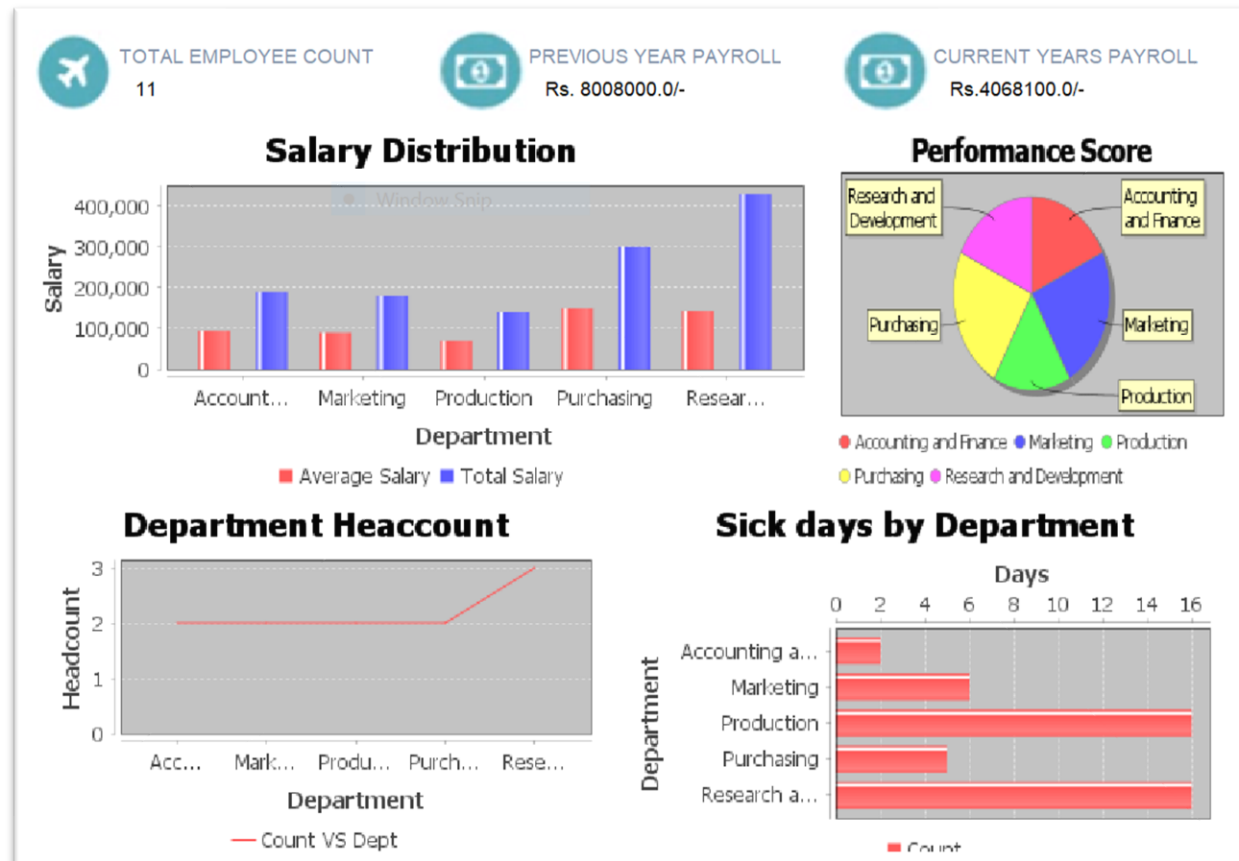

SICK DAYS BY DEPARTMENT

It allows to track how regular the employees are in department and also to know about the employees taking leave without any reason.

Analysis of 10 Employees

Analysis of 11 Employees

Objective Achieved

- The Concept of Inheritance is used to inherit various built-in classes in Java like Jtoolbar ,JMenuBar.

- Exceptions are handled by adding try and catch blocks in all the places needed.

- Multithereading is implemented using Runnable interface to display the current date and time.

- The Front-End is built using Java Swing. The javax.swing package provides classes for java swing API such as JButton, JTextField, JTextArea, JRadioButton, JCheckbox, JPanel etc.

- Wamp Server is used in order to view the backend database.

- In this project, tables are created in the backend in order to store the employees records, their attendance, performance, allowance, deduction information which is used to calculate their net pay and gross pay .

Conclusion

From this mini project I understood the need of Java in the modern day , where we need to find a logic and code a program for real time problems. Being an Computer Science Engineer it is not just knowing concepts of Java ,but to understand the depth of the program coded

THANK YOU