

Payroll Finance

Data Mart

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Version: 1.00

Written By: Tomer

1. General

1.1 Project Goals

The purpose of this project is to provide a full-scale BI Solution for AdWorks IT outsource placement company.

The solution will encompass summarized data tables, with focus on the HR and Finance Department.

The goal is to control and optimize the outsource service.

1.2 Project Content

Data mart for HR and Finance Department about the outsource service.

1. Data cleaning and preparation: prior to analysis, we will perform data cleaning and preparation to ensure their quality and consistency.
2. Main summary tables to be built for the company need:

Fact_Invoices – Information about all the generated invoices for customers. Data loading will be incremental.

Dim_Payroll - information about employee working hours and salary.

Dim_Employees - information about the company employees.

Dim_Customers - information about the company customers.

Dim_Absence - information about missing hours of employee at work time.

The ERD of tables shown in attached link: [ERD](#)

2. Work plan

Design the project, check if the design answers the requirements of the end users.

3. Technical requirements

3.1 Prerequisites

- SQL Server: adventurework2019
- Power BI for visualization

3.2 Solution Architecture

HLD:

SQL Server adventurework2019 => Data Mart => Power BI

4. Functional Specification

4.1 Visualization in Power BI

4.1.1 The report created using Power BI desktop the model includes: FactPayroll, FactInvoices, DimCustomers, DimEmployees, DimRoles and DimAbsences.

Date – for showing visuals overtime.

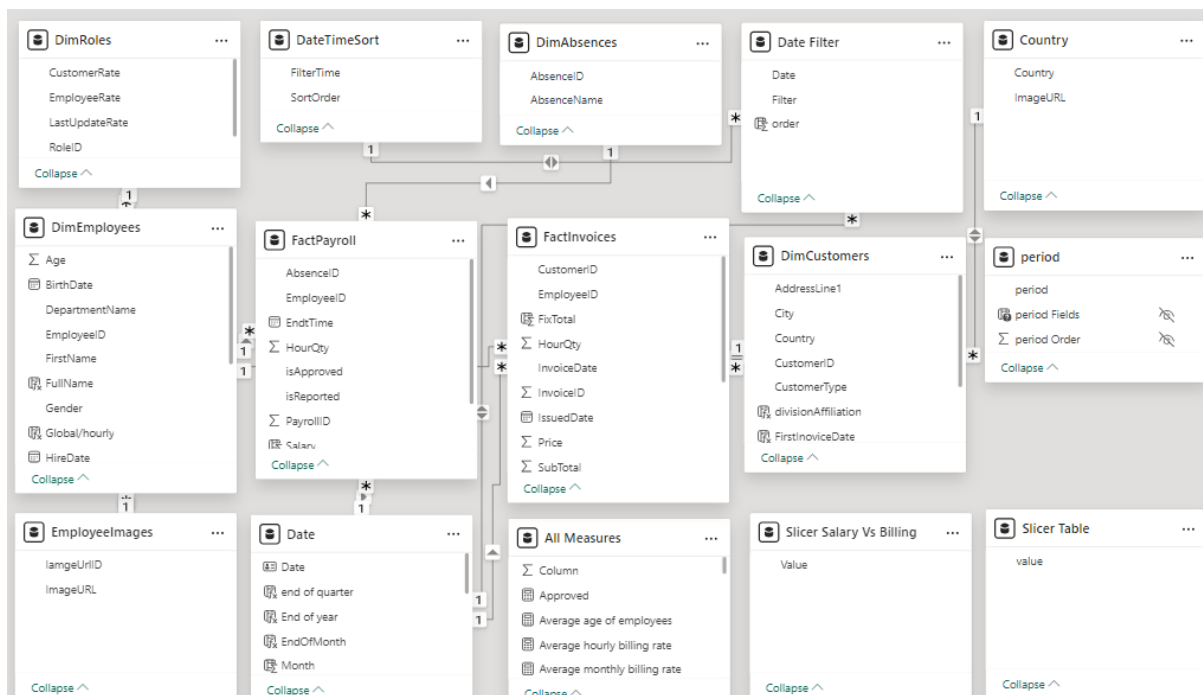
Period – for choosing time by today, yesterday or last 7 / 30.

EmployeeImages – contain images of employees,

Country – contain image of countries flag

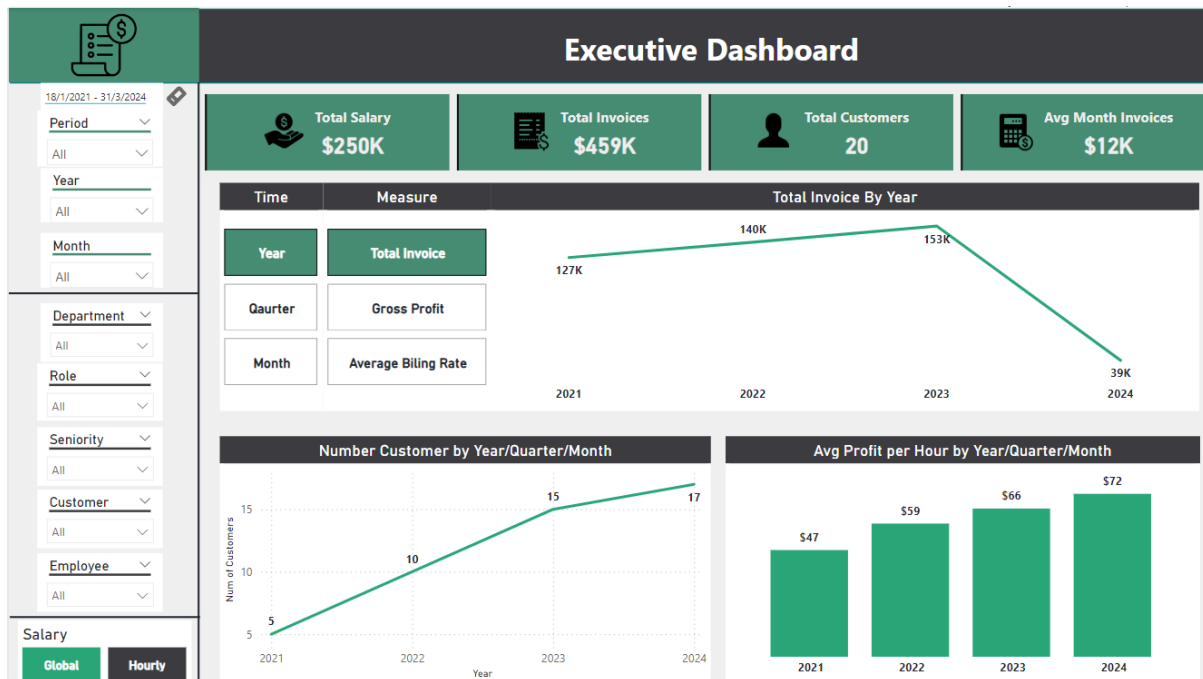
Slicers Tables – for selecting between types of reports.

Measure Table – contains all the measures that were created.



4.1.2 Executive Dashboard

This report is for border look of the Finance and HR departments.



KPI Cards – show the total salary, invoices, customers and the average billing invoices for a month.

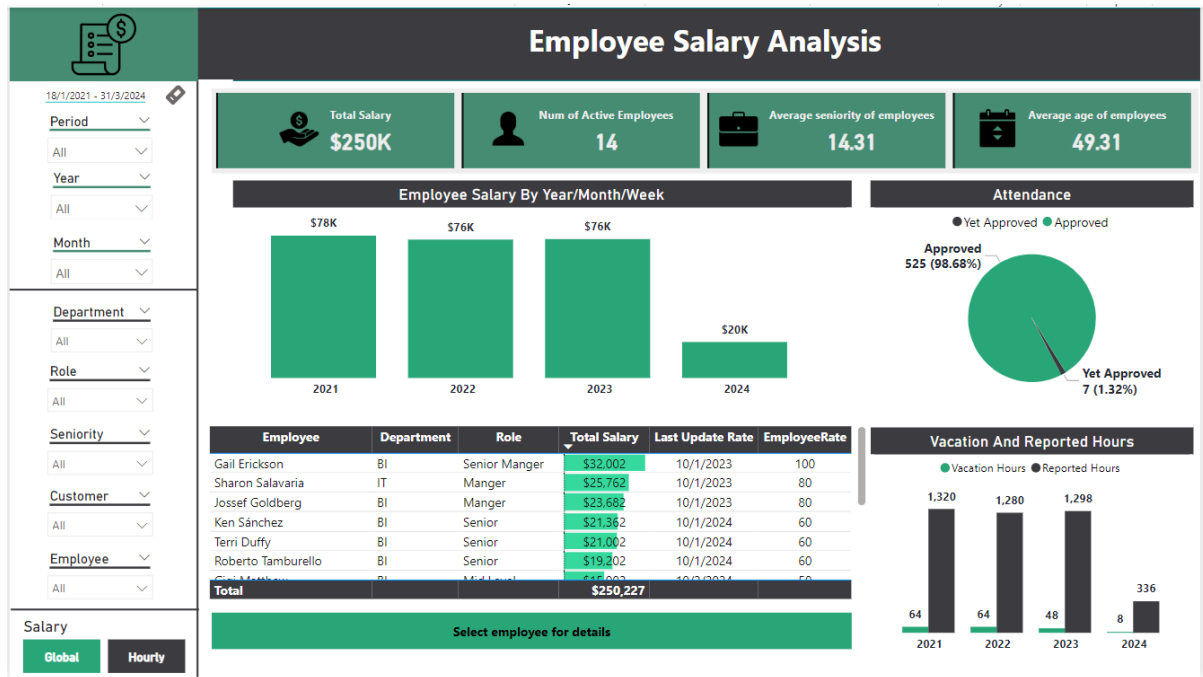
Total Invoice / Gross Profit / Average Billing Rate by Year / Quarter / Month – show changing graph over time.

Number Customer by Year / Quarter / Month – show the number of customers that got billed for period.

Avg Profit per Hour by Year / Quarter / Month – Show the average profit per hour over time.

4.1.3 Employees Salary Analysis

This report is focused on analysis of employees and salary.



KPI Cards – show the total salary, number of the active employees in the time range, average seniority and age of employees

Employee salary by Year / Month / Week – show the salary with option to drilldown into year / month / week.

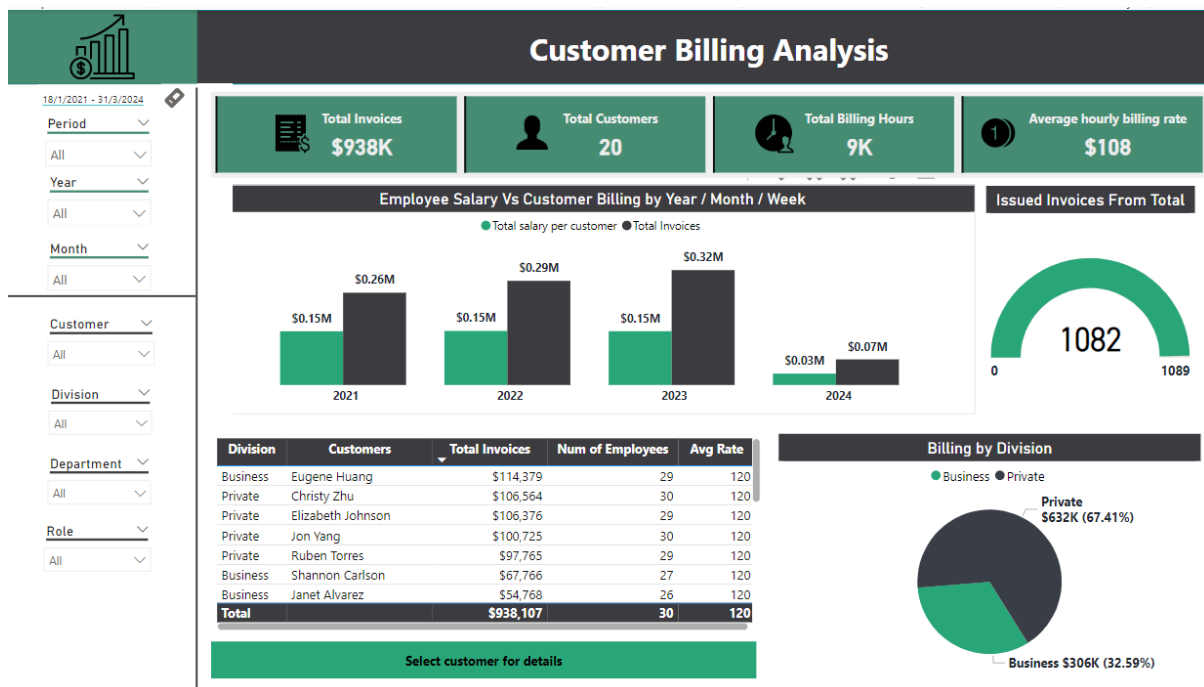
Attendance – show the number and percentage of the reported hours by employee that was approved vs not approved by the manager.

Table of employees – Show basic details of employee like department, role, total salary, last update hour rate, and employee hour rate. By selecting one the employee's the button "select employee for details" changes to show employee name details that navigate to employee details page.

Vacation and Reported Hours – Show vacation hours vs the total reported hours.

4.1.4 Customer Billing Analysis

This report is focused on analysis of customers and billing.



KPI Cards – show the total invoices, number of active customers in the time range, total billing hour, and average hourly billing rate.

Employee salary vs Customers Billing by Year / Month / Week – show the total salary vs total billing with option to drilldown into year / month / week.

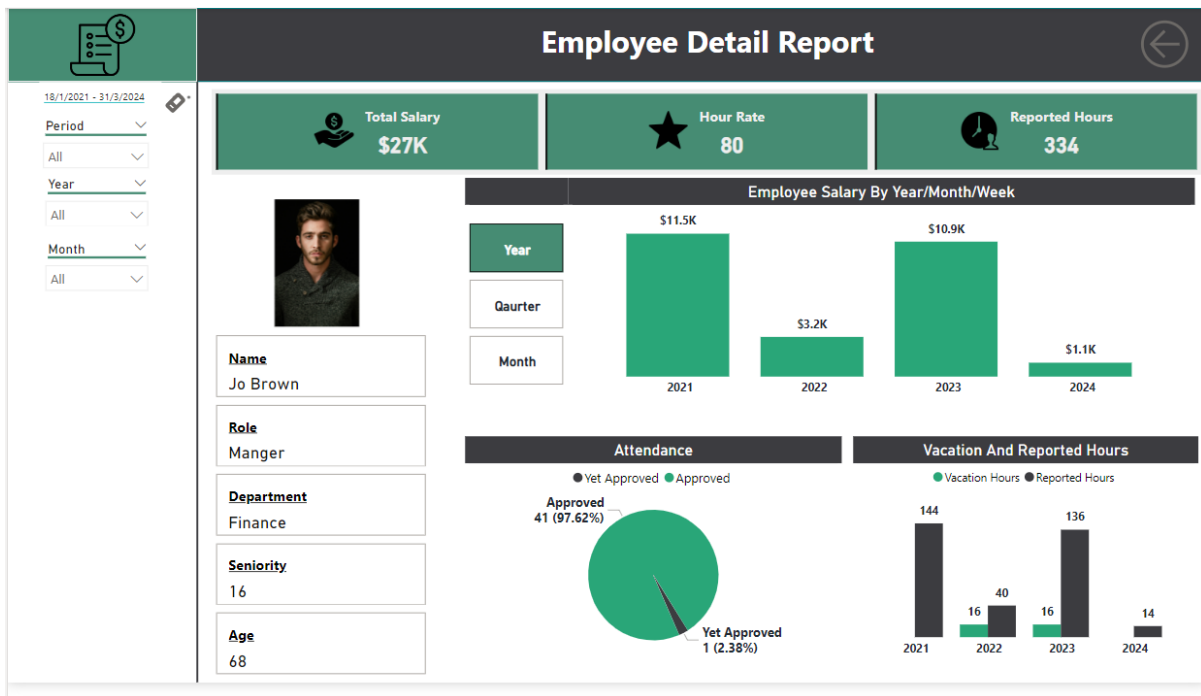
Issued Invoices from Total – show the number of invoices that have been issued and sent to the customer for payment from the total of invoices.

Table of employees – Show basic details of customer like division, total invoices, number of employees that worked for him, and billing rate. By selecting one the customers the button “select customer for details” changes to show customer name details that navigate to customer details page.

Billing by Division – Show total billing and percentage from the total for private division vs business division.

4.1.5 Employee details

This report shows the details of the employees with the same reports as Employees Salary Analysis but for the specific employee.



4.1.6 Customer details

This report shows the details of the customers with the same reports as Customer Billing Analysis but for the specific customer.

