

# **LAB 4: Specifying tools and technology.**

## **GROUP 1: Employee Management System**

### **A. Tools and Technologies**

- a. Frontend: Flutter based on Dart
- b. Backend: Node.js

### **B. Database: MongoDB**

### **C. Function Points**

The Employee profile database and Company Profile database is assumed to be preloaded by the administrator. Therefore, employees would not need to manually enter their profile. The administrator would not need to enter the company profile, hence, we won't need to count them in user inputs.

❖ Following is one example of Functional point calculation for “Show Attendance” feature.

- User Inputs: 2: The month and year.
- User Outputs: 1 ( the webpage summarising the attendance in a year)
- User inquiries: 1 (The button: Show Attendance)
- No. of Internal Logical files: 1 (The Attendance table of the database)
- Number of External Interface files: 0 (We are assuming all the data to be internal to the system)

Measurement Parameter	Count	Weighting Factor	Ans
User i/p	2	3	6
User o/p	1	4	4
User inquiries	1	3	3
Internal Logical Files files	1	7	7
Ext. interfaces	0	5	0
Count - total			20
Complexity multiplier			1.2
Function Points			24

Similarly, calculating the Functional Points for all the other features. Final answers are given in the following table.

<b>Features</b>	<b>F.P.</b>
Employee Profile	12
Attendance	28
Company Profile	12
Show Attendance	24
Apply for leave	32
Leave approval by manager	29
Salary status	16
My senior & current project	29
Expenses	30
Allowances	30
Login for manager & employee	26
Employee performance	30

Hence, the total Function Points (Unadjusted) are 298.

**Productivity Assumed - 20 FP p-m**