

# Hospital leave System

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# Content

- Introduction
- Project Description
- DFD
- Cocomo Overview
- Examples
- Conclusion

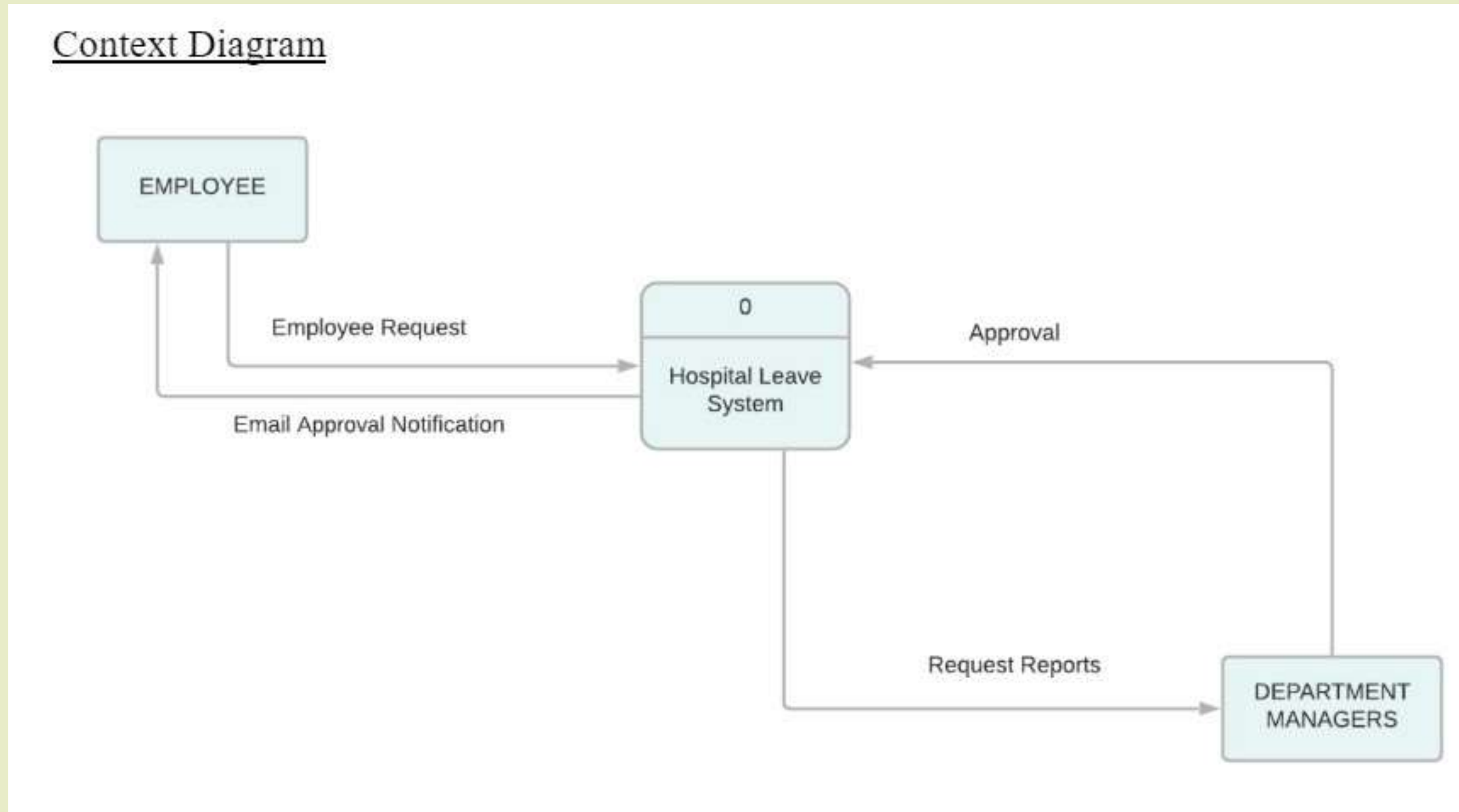
# Introduction

Many hospitals face problems with issuing leaves and vacations for employees , and keeping record of how many days each employee took off.

# Project Description

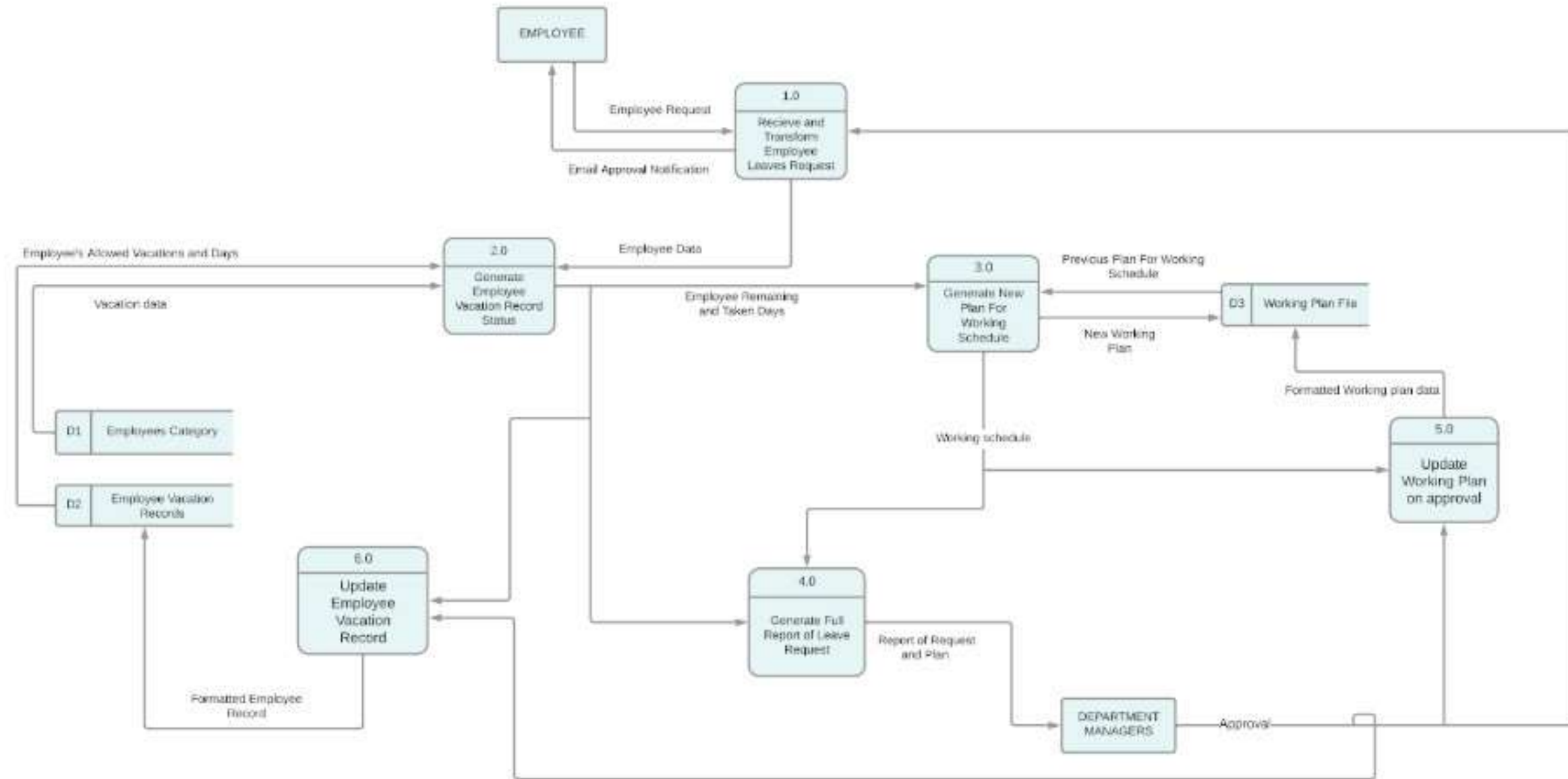
Our project aims to solve this problem by allowing employees to send leave or vacation requests to their manager through a website. And allows managers to view employees leaves and vacations requests on a website. This way, managers will be able to check if an employee's request is valid, and record of all vacations will be stored on a database.

# Context Diagram



# Level-0 Diagram

Level-0 diagram



# Cocomo overview

File Edit View Parameters Calibrate Phase Maintenance Help

Project Name:  Scale Factor:  Schedule

Development Model:

| X   | Module Name | Module Size | LABOR Rate (\$/month) | EAF  | Language | NCM Effort DEV | EST Effort DEV | PROD  | COST     | INST COST | Staff | RISK |
|-----|-------------|-------------|-----------------------|------|----------|----------------|----------------|-------|----------|-----------|-------|------|
| 1.0 |             | S:3300      | 5000.00               | 1.04 | HTML 3.0 | 12.3           | 12.7           | 258.9 | 63726.19 | 19.3      | 1.1   | 0.0  |
| 2.0 |             | S:4600      | 5000.00               | 1.04 | HTML 3.0 | 17.1           | 17.8           | 258.9 | 88830.45 | 19.3      | 1.5   | 0.0  |
| 3.0 |             | F:462       | 5000.00               | 1.04 | HTML 3.0 | 1.7            | 1.8            | 258.9 | 8921.67  | 19.3      | 0.1   | 0.0  |
| 4.0 |             | F:198       | 3000.00               | 1.04 | HTML 3.0 | 0.7            | 0.8            | 258.9 | 2294.14  | 11.6      | 0.1   | 0.0  |
| 5.0 |             | A:1059      | 2000.00               | 1.04 | HTML 3.0 | 4.1            | 4.2            | 249.4 | 8492.63  | 8.0       | 0.4   | 0.0  |
| 6.0 |             | A:1059      | 2000.00               | 1.04 | HTML 3.0 | 4.1            | 4.2            | 249.4 | 8492.63  | 8.0       | 0.4   | 0.0  |

|                      |                                     |             |        |       |       |           |      |       |      |
|----------------------|-------------------------------------|-------------|--------|-------|-------|-----------|------|-------|------|
| Total Lines of Code: | <input type="text" value="10678"/>  | Estimated   | Effort | Sched | PROD  | COST      | INST | Staff | RISK |
| Hours/PM:            | <input type="text" value="152.00"/> | Optimistic  | 33.2   | 11.2  | 321.2 | 144606.16 | 13.5 | 3.0   |      |
|                      |                                     | Most Likely | 41.6   | 12.0  | 257.0 | 180757.70 | 16.9 | 3.5   | 0.0  |
|                      |                                     | Pessimistic | 51.9   | 12.9  | 205.6 | 225947.13 | 21.2 | 4.0   |      |

# Example of SLOC

SLOC Input Dialog - 1.0

**Sizing Method**

- ☒ SLOC
- ☐ Function Points
- ☐ Adaptation and Reuse

**Breakage**  
% of code thrown away due to requirements evolution and volatility

REVL

**Module Size in SLOC**

Language

SLOC

OK Cancel Help

**SLOC:** is used for the sizing method of receiving and transforming the employee leaves request process.

Receive and transform employee leave requests



# Example of Function points

The screenshot shows the 'SLOC Input Dialog - 3.0' window. It has three radio buttons for 'Sizing Method': 'SLOC' (unselected), 'Function Points' (selected), and 'Adaptation and Reuse' (unselected). To the right, there's a 'Breakage' section with a text description and a 'REVL' input field set to '10.00'. Below this is the 'Module Size in Function Points' section, which includes a 'Language' dropdown set to 'HTML 3.0', a 'Change Multiplier' button, and a multiplier value of '15'. It also has 'Ratio Type' (Jones selected, David unselected) and 'Calculation Method' (Using Table selected, Input Calculated Function Point unselected). A table lists function types with their counts and subtotals. At the bottom, it shows 'Total Unadjusted Function Points' as 28 and 'Equivalent Total in SLOC' as 420. Standard 'OK', 'Cancel', and 'Help' buttons are at the bottom.

| Function Type                    | # of Function Points |         |      | SubTotal |
|----------------------------------|----------------------|---------|------|----------|
|                                  | Low                  | Average | High |          |
| Inputs                           | 1                    | 1       | 0    | 7        |
| Outputs                          | 1                    | 2       | 0    | 14       |
| Files                            | 1                    | 0       | 0    | 7        |
| Interfaces                       | 0                    | 0       | 0    | 0        |
| Queries                          | 0                    | 0       | 0    | 0        |
| Total Unadjusted Function Points |                      |         |      | 28       |
| Equivalent Total in SLOC         |                      |         |      | 420      |

**The function point** for cost estimation is used in generating a new plan for the working schedule process, based on the amount of functionality in a software project and a set of individual project factors

Generate a new plan for the working schedule

# Example of Reuse

SLOC Input Dialog - 5.0

**Sizing Method**

☐ SLOC

☐ Function Points

☒ Adaptation and Reuse

**Breakage**

% of code thrown away due to requirements evolution and volatility

REVL

**Adaptation**

Initial SLOC

Language

|   |                                   |      |
|---|-----------------------------------|------|
|   | <input type="text" value="2500"/> |      |
| % Design Modified (DM)                      | <input type="text" value="60"/>   | %    |
| % Code Modified (CM)                        | <input type="text" value="30"/>   | %    |
| % Integration Modified (IM)                 | <input type="text" value="25"/>   | %    |
| Software Understanding (SU)                 | <input type="text" value="16.6"/> | SU   |
| Assesment & Assimilation (AA)               | <input type="text" value="4"/>    | AA   |
| Unfamiliarity with Software                 | <input type="text" value="0.4"/>  | UNFM |
| % Components Automatically Translated (AT)  | <input type="text" value="15"/>   | %    |
| Automatic Translation Productivity (ATPROD) | <input type="text" value="2400"/> |      |

Computed Adaptation Adjustment Factor 40.5

Computed ASLOC 1059

OK Cancel Help

**Adoption and Reuse** method that we used to sizing the update working plan on approval process

Update working plan on approval

# Conclusion

This system will help many hospitals with managing their employees' leaves and vacations. Which will improve the functionality of their work



Thank you for listening  
any questions?