

Policies

The policies defined here apply to every software development project, covering thematic policies as described below.

Responsibilities:

- The software development policy is mandatory for all software development staff working at the institute.
- The software factory team is responsible for driving the execution and compliance of the software development policy.
- Those responsible for the development, acquisition, and maintenance of information systems must ensure that the system, considered an information asset, remains available, intact, and confidential during the development, maintenance, and implementation processes.

Time:

To better describe the time policies for software development, the following aspects were considered.

- Project Complexity:
 - Small (S): Projects involving few modules or simple functionalities.
 - Medium (M): Moderate-sized projects with extensive requirements and features.
 - Large (L): Complex and extensive projects that may span multiple platforms or systems.
- Change Requests During Development:
 - Each change request will be assigned to the working team upon approval, specifying the amount of time that will be allocated for the final development delivery.
- Human Resources:
 - Hiring new employees.
 - Training employees on new technologies (2 months – 6 months).
- End-User Training:
 - Training for end-users.
- Contingency:
 - 15% for unforeseen circumstances.

Tasks	Database Development	Debugging and Testing	Cloud Services	Network Security	Authentication Services	Location Services	voice/Auditory Assistants	Manuals and Maintenance
Time	2 months	6 months – 1 year	1 meses	6 months	1 month	1 month	3 months	2-3 months

Complexity Table

Role	Junior Develope	Senior Developer	Project Manager	Tester	Database Engineer	Cybersecurity Engineer
Time	1 month	2 months	2 months	1 month	1 month	1 month

Human Resources Table

Complexity	Description
Low	Database development, cloud services
Moderate	Authentication services, location services
High	Debugging and Testing, Network security
Very High	Voice/Auditory assistants, Manual and Maintenance

Effort Table

Money

Cost Calculation for Human Resources

The cost calculation is based on the factors of the number of human resources and the project development time. Monthly salaries for each role are as follows:

Human resources	Pago/ mensual
Junior Developer	1200.00
Senior Developer	2000.00
Project Manager	2500.00
Tester	2000.00
Database Engineer	2000.00
Cybersecurity Engineer	2000.00

- Time-Based Cost Adjustment:
 - For projects less than 1 year: 30% per month of the human resources value.
 - For projects exceeding 1 year: 40% per month of the human resources value.

Change Requests (CR) Summary:

CR3: Activation of Phone Camera and Microphone

- Human Resources: 1 Cloud Services Developer
- Time: 1 month for implementation
- Cost: \$3000
- Effort: Small (S)

CR4: Encryption of All Information Transmission

- Human Resources: 1 Cybersecurity Engineer
- Time: 6 months
- Cost: \$12,000
- Effort: Moderate (M)

Overall Project Summary with Previous Change Requests:

- Time: 31 months
- Cost: \$447,000
- Effort: Large (L)
- Human Resources Allocation:
 - 1 Project Manager
 - 2 Junior Developers
 - 3 Senior Developers
 - 2 Senior Developers for Cloud Services
 - 2 Cybersecurity Engineers
 - 1 Senior Database Developer
 - 1 Junior Database Developer

