Implementation Phase and General Schedule

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Plan and Schedule

1. **Implementing a database on a specific RDBMS (MySQL) – 2 Months**
    1.1. Creating physical entities
    1.2. Defining entities (adding properties)
    1.3. Building relationships
    1.4. Creating Triggers
    1.5. Creating Statements
    1.6. Creating plan to save component modification histories
    1.7. Setting up backup and recovery plan
    1.8. Setting up security
2. **Prefilling the database with old PMT's spreadsheet – 1 Month**
    2.1. Developing application program to parse old PMT's spreadsheet.
    2.2. Filling new Database with parsed data.
3. **Developing application program needed to carry out different activities according to requirements – 7 months**
    3.1. Creating Git Lab repository.
    3.2. **Creating User Interface – 1.5 Months**
        3.2.1. Drawing/planning UI based on application functionality.
        3.2.2. Creating page layout (Building basic UI structure)
        3.2.3. Creating containers (Creating containers for different components of UI)
        3.2.4. Creating Navigational Components (breadcrumb, search (filter) field, pagination, Tile Cal electronics components structure tree)

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3.2.5.   Creating Input Controls (buttons, text fields, checkboxes, radio buttons, dropdown lists, list boxes, toggles, date fields, tables for database records, Input forms of disassembly/assembly/update/Reception of components at CERN processes.)

3.2.6.   Creating Informational Components (icons, progress bar, notifications, message boxes, modal windows)

3.3. Setting up connectivity with Database. – 1 Week

3.4. Development of main functionality and connecting them to UI elements. – 5 Months

3.4.1.   Writing module of Barcode recognition based on barcode structure.

3.4.2.   Writing module for bringing either existing record for scanned component if it is already in the DB, or bringing an interface for that specific component that proposed to create a corresponding entry.

3.4.3.   Connecting components tree to a database.

3.4.4.   Writing module for search and filter of database components and component properties.

3.4.5.   Creating modules for CRUD (Create, Read, Update, Delete) operations and connecting them to UI.

3.4.6.   Creating modules for additional requirements. (Recognize super drawer structure based on partition and module; Check compatibility between the PMT block and the slot which it is being inserted in; Recognize restricted positions for PMT blocks in Super drawer, etc.)

3.4.7.   Writing module to give assistance during the process of inserting/updating data in the database. (providing hints, giving warnings in case of inaccuracy and in case of any type of system error).

3.5.   Setting up authentication and application security.

3.6.   Functionality testing, Usability testing, Interface testing, Compatibility testing, Performance testing, Security testing.

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4. **Development of technical documentation of application code and database structure. – 1 Month**
5. **Creating user manual providing troubleshooting, with the explanation of conflict cases and possible ways for the solution. – 1 Month**

Application releases:

R1.0: 3.2.1; 3.2.2; 3.2.3; 3.2.4;
R2.0: 3.2.5; 3.2.6;
R3.0: 3.3
R4.0: 3.4.1; 3.4.2
R5.0: 3.4.3; 3.4.4
R6.0: 3.4.5
R7.0: 3.4.6; 3.4.7
R8.0: 3.5

Dates:
Starting Date: 01/01/2020
End Date: 31/12/2020