**Phase III: Software design and modeling.**

System design refers to the process of defining the architecture, components, modules, interfaces, and data for a software system. It involves understanding user requirements, analyzing business processes, and designing the software system to meet the specified requirements.

The methodology used for “BrainBoost” project is Agile methodology, a software development approach that emphasizes flexibility, collaboration, and iterative development.

We applied the Incremental Model for developing the "BrainBoost" project. This model is a software development process that reduces the risk of large-scale failure by breaking the development process down into smaller, manageable increments. Allows for flexibility in the development process, a workable version may be quickly constructed, allowing the system to begin operation. The remaining features can be added to the following version and delivered later. Documentation is no longer required as in the Waterfall Model, since we are more focused on coding. Clients are constantly aware of the product being provided and have the ability to offer feedback, adjustments and upgrades that can be applied.

Diagram

Description automatically generated

**Input Module:**

Learner Enrollment, Course, Lesson, Feedback, Payment Status.

**Output Module:**

Learner List, Course Detail, Lesson Detail, Sell Report, Payment Receipt

**Software Module Detail:**

Home, Courses, Payment Status, Login, Sign Up, Feedback, Contact.

**Admin Panel:**

Control Panel, Courses, Lessons, Users Details, Sell Report, Payment Status, Feedback, Change Password, Logout

**User Panel:**

Profile, My Courses, Feedback, Change Password, Logout

**Context Diagram**

The context diagram aids in defining the scope of the e-learning software and identifying the external entities with whom it interacts.

In this context diagram, the e-learning management platform “BrainBoost” is represented at the center of the diagram. There are two external entities: the User/Learner Interface box and the Admin Interface box. The User Interface box interact with the e-learning platform. The Admin Interface allows administrators to upload and report courses. The Database box demonstrates the platform's database, which maintains information about courses, users, and administrators. The Course Catalog box shows the platform's library of courses, which may be searched, viewed, and purchased by users.

Admin

User/Learner

CourseCatalog

Database

This project is supporting the User friendly Web application

User interface design is concerned with the dialogue between a user and the computer. E-learning platform user interface design should be intuitive and user-friendly. It should make it simple for learners to browse the platform and obtain the information they want. It should be visually appealing and straightforward to use, the system user should constantly be informed of the next step. Messages, instructions, and information should be presented for a long enough period of time so the system user can read them.

**Database Design**

Database Design will be implemented using Entity-Relationship Diagram, that help us to know how information is stored, categorized and managed within it. Main entities: Admin, Learners, Course, CourseCatalog, Lesson, Feedback.

We will utilize a Unified Modeling Language (UML) class diagram to represent the entities and connections in the e-learning domain, to define the attributes and behaviors of classes in the e-learning app, and to represent the numerous entities and connections in the e-learning domain.