# 

BAHRIA UNIVERSITY KARACHI CAMPUS

**Department of Software Engineering**

**COURSE: CSL 113**

**COMPUTER PROGRAMMING**

**PROJECT Proposal**

**CLASS: BSE – 1C (FALL - 2024)**

Project Title

**Group Members**

|  |  |  |
| --- | --- | --- |
| **S. No.** | **Name** | **Enrollment #** |
| 01 | Muhammad Bilal | 02-131242-057 |
| 02 | Huzaifa | 02-131242-059 |

**Submitted to:**

**Course Instructor:** Engr. Muhammad Faisal

**Lab Instructor:** Engr. Noor us Sabah

**Date: 11/25/24**

# **INTRODUCTION & BACKGROUND**

While the university's CMS and LMS assists in taking attendance, managing class schedules, and courses, they do nothing to address the daily challenges faced by students in the management of tasks, study goals, and good habits, hence this project aims at helping bridge that gap by giving a tailored productivity tool.

# **PROBLEM STATEMENT**

# LMS lacks the features such as tasks prioritizing, tracking habit and offline usability.

# Hence, students require a bridge to fill this gap in terms of both academic and personal productivity issues.

# **PROPOSED SOLUTION**

## **3.1. FEATURES OF THE PROJECT**

* Task Manager (add/track tasks, mark them completed).
* Study Planner (set goals, track progress).
* Habit Tracker (monitor activities like exercise, reading).
* Offline Functionality (ensure accessibility without internet)

## **3.2. METHODOLOGY**

 **Planning:** Identify essential productivity features.

 **Learning**: Identify and Learn essential concepts,skills and tools required for this project.

 **Designing:** Use simple and intuitive interfaces.

 **Development:** Create the system using **C# and WinForms**, with local storage (SQLite or text files).

 **Testing:** Validate features and fix usability issues.

## **3.3. TECHNOLOGIES TO BE USED**

1. **Programming Language: C#**  
   It is easy to learn and very suitable for developing Windows desktop applications. It also supports object-oriented programming, hence keeping the code clean and reusable.
2. **Framework: WinForms**  
   Simple, beginner-friendly UI framework to create a basic and fully functional desktop interface for the application.
3. **Database: SQLite**  
   Light, serverless, and easy to set up. Data stored locally so it works offline as well.
4. **Data Access: ADO.NET / SQLite.NET**  
   Simplify process of connecting to the SQLite database and managing data (add, update, delete operations).
5. **Charts: LiveCharts (Optional)**  
   Easy charting library to create a view for progress, such as completion of tasks or tracking habits.
6. **Development Environment: Visual Studio**  
   The best IDE for C# development with debugging and tool support.
7. **Packaging: Inno Setup / WiX Toolset**  
   Easy-to-use tools to create a Windows installer to distribute the app.

## **3.4. PROJECT SCOPE**

#### **Included in the Scope:**

1. **Task Manager:**
   * Add, update, delete, and prioritize tasks.
   * Track task completion and due dates.
2. **Study Planner:**
   * Set and track study goals and deadlines.
3. **Habit Tracker:**
   * Track and visualize personal habits (e.g., exercise, reading).
4. **Offline Functionality:**
   * All features will work offline, with no internet required.

#### **Excluded from the Scope:**

1. **Integration with LMS or External Systems.**
2. **Cloud Syncing or Multi-Device Support.**
3. **Advanced Features (e.g., notifications, data analytics).**

#### **Project Goals:**

* Develop a simple, user-friendly desktop application for managing academic and personal tasks, focusing on essential features.
* Future updates will add additional features, but the current version will focus on core functionality.

# **PROJECT ABSTRACT**

The Student Productivity Manager is a standalone application designed to improve student productivity. It provides tools for managing tasks, planning study schedules, and tracking habits in a single, user-friendly interface. Developed using C# WinForms and SQLite, it ensures offline accessibility, focusing on simplicity and practicality for student users.

# **MODULE DISTRIBUTION**

|  |  |  |
| --- | --- | --- |
| **Module** | **Description** | **Assigned To** |
| **Task Manager** | Enables users to add, edit, prioritize, and track tasks or assignments. | Huzaifa |
| **Study Planner** | Allows users to set study goals, track progress, and review weekly/daily targets. | Muhammad Bilal |
| **Habit Tracker** | Tracks personal habits like exercise or reading, Includes progress charts. | Huzaifa |
| **Database Integration** | Handles data storage, retrieval, and updates using SQLite or file handling. | Huzaifa |
| **UI/UX Design** | Designs the graphical interface for the application, ensuring a user-friendly experience. | Muhammad Bilal |
| **Teting and Debugging** | Validates inputs, ensures functionality, and resolves any errors across modules. | both members |

# **REFERENCES**

 S. Smith, C# Programming for Beginners, 3rd ed., Pearson Education, 2019.

 M. Roberts, "How to Use SQLite in C#," Stack Overflow. Available: [https://stackoverflow.com/questions/12345678/how-to-use-sqlite-in-c#](https://stackoverflow.com/questions/12345678/how-to-use-sqlite-in-c).

 "C# WinForms Tutorial," Microsoft Docs. Available: <https://docs.microsoft.com/en-us/dotnet/desktop/winforms/>.

 SQLite, SQLite Database Engine. Available: <https://www.sqlite.org/>.

 "LiveCharts Documentation," LiveCharts. Available: <https://lvcharts.net/>.

 "C# Basics for Beginners," freeCodeCamp. Available: https://www.freecodecamp.org/news/c-sharp-tutorial-for-beginners/.

 Microsoft, Visual Studio Documentation. Available: <https://docs.microsoft.com/en-us/visualstudio/>.

Teacher’s Signatures: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Remarks: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_