

Offline Desktop-Application

Calendar Management Tool

To Enhance Time and

Task Organization

A System Presented to the

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Chapter 1

THE PROJECT AND ITS BACKGROUND

Introduction

In today's world, modern technology has greatly influenced people's lives, playing an essential role as an effective tool to improve their lifestyles. Education, for example, has been transformed by online learning platforms, enabling students to access resources and courses from anywhere in the world. Similarly, healthcare has seen remarkable improvements with the development of advanced medical devices, telemedicine, and digital health records, all of which contribute to better patient care and management. In communities, technology has strengthened connections, enabling individuals to stay in touch through tools like smartphones, social media, and instant messaging across long distances. The modern technology also changed industries, creating new jobs and changing the way businesses operate. With technology advancing so quickly made the tasks more efficient and also opened doors to opportunities that were once unimaginable.

While technology has revolutionized many aspects of life, including education, technology can also play a crucial role in addressing one of the major challenges students face today, managing their time effectively. Many students struggle to remember all the tasks and responsibilities they have each day, balancing school, family, and personal goals. Technology,

however, offers tools and applications designed to help students organize their schedules, set reminders, and track deadlines, helping them stay on top of their responsibilities. By using these technological advancements, students can improve their time management, reduce stress, and enhance productivity.

Time management is a critical factor influencing students' academic success. Effective time management helps individuals align their daily routines with academic goals, promoting steady progress and positive outcomes. A conducive environment, combined with quality lectures, supports student achievement, but personal time management skills remain a vital component of academic success. Poor time management negatively impacts students' academic performance and overall well-being, often increasing stress as they struggle to balance academic tasks and personal goals. Understanding and improving time management skills are essential for students in higher education to enhance productivity and reduce stress. (Nasrullah & Khan, 2022).

The republic acts related to the project — Calendar Management Tool System is Republic Act No. 11293, An Act Adopting Innovation as Vital Component of the Country's Development Policies to Drive Inclusive Development, Promote the Growth and National Competitiveness of Micro, Small and Medium Enterprises, Appropriating Funds Therefor, and for Other Purposes was signed into law on April 17, 2019 by President R. Duterte.

“The policy of the State to foster innovation as a vital component of national development and sustainable economic growth. Pursuant to Section 10, Article XIV of the Constitution that recognizes science and technology as "essential for national development and progress" and gives priority to "research and development, invention, innovation and their utilization"

The provision from Republic Act No. 11293, specifically in Section 2, emphasizes the importance of innovation in driving the country's progress. The law declares that fostering innovation is essential for national development and sustainable economic growth.

This declaration is grounded in the Philippine Constitution, particularly in Section 10, Article XIV, which recognizes that science and technology are key to national development. The Constitution also prioritizes research and development, invention, and innovation as crucial elements for the country's advancement. In the context of the Calendar Management Tool System, the law becomes relevant because the project embodies the spirit of innovation leveraging technology to improve productivity, streamline processes, and ultimately support sustainable development.

The Calendar Management Tool System is a digital platform designed to help individuals and organizations efficiently manage their schedules by organizing events, tasks, and appointments. With features such as event creation and reminders, the project aims to streamline time

management and improve productivity. The system offers flexible views and seamless integration, making it an essential tool for staying organized and on track.

Project Context

Managing tasks, schedules, and time effectively is essential for personal and professional productivity especially it's a crucial skill for students to balance their academic responsibilities, extracurricular activities, and personal commitments. Many students still use traditional methods such as bulletin boards, index cards, and printed papers that has been proven effective for organizing student schedules, but the advent of technology offers enhanced convenience and efficiency. Using traditional methods, such as writing schedules and tasks on paper, is not enough for students to remember their upcoming tasks and schedules. This is because students might lose the paper where they wrote down their plans. To address this issue, the project developers propose a system called the "Calendar Management Tool" that focuses on organizing students' schedules and upcoming task deadlines.

The primary objective of the developed system is to provide assistance to students or learners with complex schedules and tasks by organizing them, thereby helping students achieve comfortable time management and reducing stress associated with academic performance.

As the project developers themselves are students, they understand firsthand the struggle with time management while striving for active learning. This served as the foundation for the system's development and as a valuable tool for students aiming for success in today's fast-paced educational environment.

Purpose and Description

A calendar management tool system is a software application designed to help individuals and teams schedule, organize, and manage events, appointments, meetings, and tasks. Its purpose is to enhance productivity by automating reminders, preventing scheduling conflicts, and enabling efficient time management.

The results of the system will be beneficial to the following:

To Students. The system helps students improve time management, stay organized, meet deadlines, and prioritize tasks effectively through automated reminders and streamlined scheduling.

To Future Project Developers. The system provides future project developers with a valuable starting point for creating or improving similar systems. The system could be used as a reference in conducting new researchers related to the topic.

Objectives

The General Objective of the Propose System is to develop Calendar Management Tool System.

Specifically, the project developers aim to:

1. To provide a user-friendly scheduling interface where students can easily add, view, and manage academic task, deadlines, and personal events.
2. To implement a reminder system that sends pop-up notifications to students about upcoming tasks or deadlines.
3. To develop a user interface that is simple and tailored to the needs of students, allowing easy navigation, task creation, and calendar management.
4. To implement an optional set reminder for user for their upcoming task and schedule.
5. To help users organize their daily activities, and prioritize tasks efficiently.

Scope and Delimitations

The Calendar Management Tool system is designed to teams and organize the students' task and time schedule, and manage events. The system can help students by easily adding, viewing, and managing their academic tasks, deadlines, and personal events, allow them to edit, add,

and delete the task and time schedule. The system has an option to set a reminder via pop-up notification to students' desktop for their upcoming task or deadline. The system can be used and run the application without internet connection or mobile data, and the system can display the user schedule through calendar user interface.

However, there are certain limitations:

- The system is limited to managing individual schedules and does not support group collaboration.
- The system can be used in mobile phones, the system is designed primarily for desktop use.
- The system can't be integrated with the third-party apps or platforms is also outside the current scope, focusing instead on standalone functionality to meet students immediate time management needs.

Technical Background

The project developers use a desktop application. The system of the application can be used without login or sign-up option, the system will direct the user to access the application. The system displays a calendar schedule interface, allowing the user to create, edit, and organize tasks or events within a calendar interface. The system uses Toast notification as a reminder, the user has an option to set a reminder or not for their upcoming task or schedule. Notifications and reminders ensure users stay updated on

upcoming deadlines. The system is particularly valuable in fostering time management skills, and students can reduce stress, improve productivity, and maintain better control over their academic and personal activities, which are essential for academic success and personal growth.

Operational Definition of Terms

Application – It refers to a software program installed on a digital device, such as a smartphone or computer, that students use to perform specific tasks, such as organizing schedules, setting reminders, or managing academic activities.

Calendar – It refers to the interface display of the application wherein the students can create, organized and view their task schedule.

Deadlines – It refers to the specific dates or times by which students are required to complete tasks, assignments, or projects, often serving as a guide for time management and prioritization.

Notification – It refers to an alert or reminder generated by a digital device or application to inform students about upcoming tasks, deadlines, or events, helping them stay organized and manage their time effectively.

Stress – It refers to the physical or emotional tension experienced by students when they feel overwhelmed by academic responsibilities, deadlines, or personal challenges, often affecting their overall well-being and performance.

System – It refers to a structured framework or software designed to assist students in organizing, managing, and tracking their tasks, schedules, and deadlines to improve productivity and time management.

Task – It refers to a specific activity or responsibility that a student needs to accomplish, such as completing assignments, studying for exams, or attending scheduled events.

Technology – It refers to the tools, devices, and systems, such as smartphones, computers, and online platforms, that students use to enhance their learning, manage tasks, and improve productivity.

Time Management – It refers to the ability of students to plan, organize, and prioritize tasks effectively within a given timeframe, using strategies or tools like schedules, apps, or reminders to ensure that academic and personal responsibilities are met.

User interfaces – It refers to the interaction between user and a computer. It allows user to input or exchange information about their task and schedule in the desktop application through using the computer.

Chapter 2

REVIEW OF RELATED LITERATURE, STUDIES, AND SYSTEMS

This chapter presents a comprehensive review of the literature, studies and systems that includes the ideas, finished thesis, generalization or conclusion. The information included in this chapter helps to understand details that are related and similar to the present study.

Local Literature

According to Candelasa et al. (2023), students face difficulty in balancing their work and studies, which hinders their ability to focus on academics. Despite time management techniques being important for optimizing productivity and organization, students struggle to effectively manage their time due to the pressure of their work commitments.

According to Paguio (2019), academic procrastination significantly influenced time management, with respondents strongly agreeing on its impact. Additionally, students consistently used prioritization techniques, such as daily checklists, to enhance time management and organization. This highlights the importance of structured approaches to effectively manage academic tasks and reduce procrastination.

Foreign Literature

Effective time management has been found to have a significant impact on an individual's health and well-being. Poor time management often results in staying up late to complete tasks, leading to sleep deprivation and subsequent fatigue. Conversely, by efficiently organizing one's schedule, individuals can ensure adequate sleep, which is vital for overall health. Sufficient rest has been linked to improved cognitive function and enhanced productivity during waking hours. Conversely, a lack of time management can induce stress, particularly when tasks remain incomplete. This can contribute to heightened levels of stress and anxiety, negatively impacting mental well-being. Thus, prioritizing effective time management strategies is essential for maintaining both physical and mental health (Team Leverage Edu, 2023).

Effective time management serves as a preventive measure against various forms of disappointment that may arise in life, encompassing financial, professional, social, and other domains. Through diligent planning and allocation of time, individuals can mitigate the likelihood of encountering these setbacks simultaneously. It is emphasized that every aspect of life holds equal importance, rendering it futile to sacrifice one facet for the sake of another. While accruing significant wealth may seem advantageous, neglecting one's health ultimately leads to dissatisfaction. Conversely, adept time management enables individuals to sidestep such adversities, thereby fostering a balanced and fulfilling life (Chansaengsee, 2017).

Local Studies

According to Pedroso et al. (2021), managing time effectively is a significant challenge for students, especially for those who work at the same time. As a result, they may feel overwhelmed by the need to complete assignments, study for exams, and meet deadlines while also fulfilling their work obligations.

According to Camangyan (2023), people with strong time management skills are more likely to succeed academically than those without these skills. However, not everyone who manages their time well can fully handle the challenges of academic work. Time management skills are helpful for improving productivity, staying organized, and achieving academic success. Time management means planning and organizing how to use your time for different tasks.

Foreign Studies

According to Chaudhari (2022), time holds immense significance as it essentially equates to life itself. As humans progress through life, energy and physical capabilities tend to decline over time. Therefore, it becomes crucial to accomplish tasks within specific timeframes, as any action undertaken after the allotted time becomes futile. Based on a literature survey, The study identifies task prioritization as the most essential tool for effective time management.

Chandnani and Chadha (2023) states that time management plays a vital role in influencing an individual's overall performance and accomplishments. How people organize their time for daily tasks significantly impacts their ability to carry out responsibilities smoothly and consistently. For teenagers, mastering time management is especially important for academic success. Poor time management skills among teens can detrimentally affect their academic performance and increase stress levels as they juggle tasks and goals. Additionally, the relationship between behavior, attitude, and time management positively correlates with teenagers' academic achievements. Time planning is the most crucial affiliated anticipator.

Time management is rapidly becoming a primary concern for individuals in both personal and professional spheres, spanning from top-level management to operating-level supervisors. Efficient time management not only improves project and operational efficiency but also leads to cost reduction. The primary aim of time management is to utilize available time effectively, optimizing productivity and attaining desired results. (Cyril, 2015).

Local System

Time scheduling systems have become an essential tool in improving efficiency in academic institutions, providing solutions to the challenges of class and resource management. According to the study by

Aleon et al. (2020), the integration of time management techniques, such as the Eisenhower Matrix, has proven effective in enhancing the time management skills of students, particularly in senior high school settings. The research demonstrated that time management frameworks help students prioritize tasks more effectively, contributing to improved academic performance. Such systems not only provide a structured approach to managing tasks but also reduce stress levels among students, enabling them to meet academic demands without feeling overwhelmed.

In line with this, the development of automated scheduling systems in educational institutions has gained momentum as a solution to the inefficiencies of manual scheduling. A study by Clarianes et al. (2020) discusses the development of an Integrated Scheduling System (ISS) specifically designed for state colleges and universities in the Philippines. The system integrates various functions, such as automated teaching load assignments and real-time updates, which significantly improve the accuracy and timeliness of scheduling. This system is lauded for its ability to handle complex scheduling needs and its potential to enhance the overall operational efficiency of academic institutions.

Foreign System

Candelaria (2021) highlighted the use of time tracking software for team productivity and management, emphasizing its role in organizing tasks

and schedules effectively. This concept is applied to the proposed system, a calendar management tool designed to help users efficiently plan and manage their activities, reducing scheduling conflicts and enhancing productivity.

Similarly, the Automatic Timetable Generation System simplifies the complex process of scheduling by automating the allocation of resources like teachers, classrooms, and time slots while adhering to hard and soft constraints. The system, developed in Java, aligns closely with the functionality of the proposed system, as both focus on efficient resource management and scheduling.

Synthesis of the Review

Literature reviews, studies, and systems consistently highlight the importance of calendar management tool system in improving time and task organization. These tools allow students to view their organized tasks and schedules directly on their desktop displays, providing a convenient way to manage their responsibilities. The inclusion of reminder features ensures students stay on track with their tasks and commitments.

According to the reviewed studies, calendar management tool system provides an efficient means of planning and managing time and activities, significantly enhancing productivity. Many of the reviewed systems incorporate automated scheduling and time-tracking features,

which are highly relevant to the development of similar system. Compared to traditional paper-based methods of organizing schedules, digital systems are more effective for students. The system not only allow to organize and access the scheduling but also offer additional features such as reminders to improve time management.

Chapter 3

EVALUATION, DESIGN AND FRAMEWORK

This chapter elaborates the Discussion of Expected Output and Justification, Operational Framework, Requirements Specification, and Conceptual Framework.

Discussion of the Expected Output and Justification

The system will propose a desktop application. The application will assist the students in organizing their task and time schedule so that they will not tend to forget and manage properly their important task. The application system will serve as a tool to add and view the calendar schedule and receive a notification about the reminder that students set for their upcoming schedule, which the students can utilize the application to properly manage their task schedule. The project developers could see, several students struggle to do their overlapping task due to having a poor time management.

OPERATIONAL FRAMEWORK

The analysis methods are included in the operational framework. This approach focuses on understanding the user experiences and adapts based on feedback, this method is used to conduct evaluation making the

development process more responsive. The development of the calendar management tool system follows a structured framework based on the spiral model. The spiral model has four stages: planning, risk analysis, testing, and evaluation. The project repeats these stages on cycles over time. These stages represent the project's growth and outline the steps in its development process.



Figure 1

**An Operational Framework showing the Development of Calendar
Management Tool System using the Spiral Model**

The first phase is planning. The project developers gather the initial requirements for the calendar time and task management tool system, such as key features like scheduling and reminder. The project developers engage in thoroughly brainstorming processes to help to define the scope of the tool and plan its features based on user needs. Design, software development, analysis, testing, and implementation are all included in planning.

The second phase is risk analysis. The system may face challenges like user interface design, integration with other apps, or data security. In this phase, potential risks are identified, and project developers assess how to provide practical solutions to these challenges based on the problem after gathering data and analyzing the issue using the current system.

The third phase is testing. Project developers will incrementally build the calendar management tool system. The features such as event creation or reminder notification, are tested in cycle, ensuring functionality and fixing any bugs or issues early on. In addition, user feedback gathered, helping to refine the tool, and the system is developed to be user-friendly and easy to use.

The fourth phase is evaluation. The initial testing is conducted by the project developers to identify any issues or bugs. The project developers fix these problems until no error remains. The system is evaluated based on user feedback to ensure it meets all requirements. If needed, additional updates are added in the next cycle to ensure ongoing improvement.

Requirements specification

The technical requirements of the system for software were needed in order to develop the application-based system, the project developers use a Visual Basic as the programming language. Visual Basic provide a graphical user, users can interact with adding and viewing. While for the database, SQLite as a database engine to manage and store the calendar management took system data locally and retrieve the data. The toast notification uses to be the system device as a reminder system that sends pop-up notification.

CONCEPTUAL FRAMEWORKS

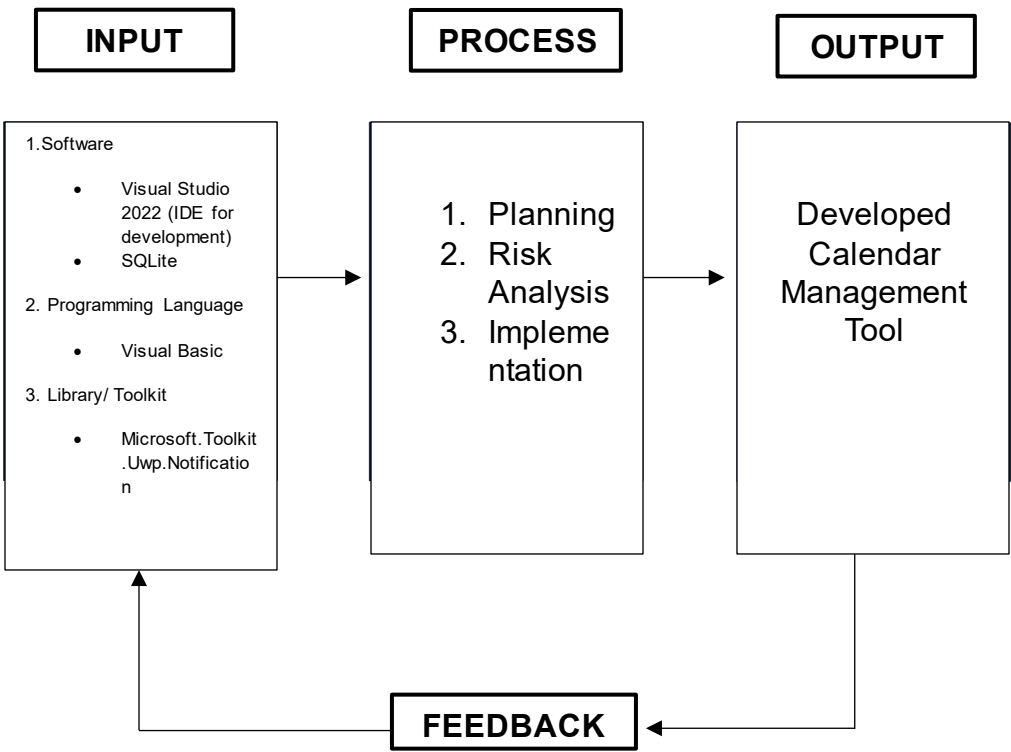


Figure 2

Conceptual Framework Showing the Development and Acceptability of Calendar Management Tool System

The project developers used an input/process/output model to guide the step-by-step procedures during and after the system development. The input includes software, programming languages, and toolkits. To build an effective system and achieve the goal, the project developers use their own abilities to learn about the programming languages that may be needed.

In the process stage, project developers create a plan and conducted a risk analysis to identify potential challenges and setbacks during the system demonstration. The project developers were open to feedback, actively listening to recommendations, and implementing suggestions to improve the system, helping to achieve the system's goals.

The output, which is the developed and validated system, will be completed accurately, achieving the goal of creating the Calendar Management Tool System.

All feedback received is noted and considered as recommendations for future system development.