Multidisciplinary Applied Research and Innovation Vol. 4 No. 1 (2023) 179-183

MARI

Homepage: http://publisher.uthm.edu.my/periodicals/index.php/mari
e-ISSN :2773-4773

E-Planner Scheduling System (EPSS): Jotting Down and Managing Schedule Online

Muhammad Danial Akmal Rosli, Sharhida Zawani Saad*

School of Computing (SOC), College of Arts and Sciences, Universiti Utara Malaysia, Sintok, 06010, MALAYSIA

*Corresponding Author Designation

DOI: https://doi.org/10.30880/mari.2023.04.01.033
Received 15 October 2022; Accepted 30 November 2022; Available online 15 January 2023

Abstract : With the rapid growth of technology nowadays, the usage of papers and manual ways to write on organizers, planners or diaries gradually become obsolete, although not in a complete manner. People are much attached to devices such as smartphones, PCs or tablets to do various tasks such as writing notes and planning schedules and activities. These devices provide more convenience and the benefit of mobile features, easy to carry anywhere and anytime. The objectives of this work are to identify requirements, develop the E-Panner Scheduling System (EPSS) and evaluate the usability of the system. The EPSS can benefit students in planning any meeting schedules, academic programs or marking the dates for important events such as exams, quizzes, crucial assessments, academic calendars or even semester breaks. The methodology used is the Rapid Application Development (RAD) model, due to the flexibility of the method that allows amendments or modifications easily from time to time. Also, the cycle time of the project could be reduced through the usage of reusable existing components. To evaluate the project's usability, a field study was conducted and the results based on the evaluation proved that the EPSS is convenient to be used. The study contributes toward a comprehension of the requirements of the system and the user interface of a Web-based system to handle and manage crucial tasks and activities more efficiently in supporting today's active and demanding lifestyles. It can be a reference model for similar Web applications or enhance the capabilities in organizing and managing routines, schedules and events better.

Keywords: online planner, organizer, diary, manage schedule, organize study, event

Corresponding author: sharhida@uum.edu.my

1. Introduction

The EPSS is developed to help people in arranging their daily activities or routines such as house chores, completing assignments, date of important events, and so on. A daily planner is important because it helps people to manage time more systematically, increases productivity and makes a reliable long-term daily record [1]. Among the advantages of a digital daily planner are enabling users to navigate to certain pages, lists, months, weeks and others in the daily planner. Other than that, the digital planner will not run out of space and allows them to add more than one page for their convenience. There are actually various digital planners such as Planners Collective's, My Daily Planners 2022 Digital Planner and Evo Printables Fitness; in which all of them are highly customizable and have appealing interfaces [2]. This system is developed using the Visual Studio Code software and programming languages such as HTML, Javascript and CSS, and the CPanel database. Visual Studio is used because it supports many programming languages, detects incomplete or wrong code snippets, and can be used in all operating systems such as Windows, Linux and Mac [3]. Meanwhile, HTML is supported by all available browsers such as Google Chrome, Microsoft Edge, Mozilla Firefox and many more. Beginners also can apply HTML in web design as it is easy to learn, not to mention that it becomes the pioneer of web advancement. At last, the HTML is open-source and free, hence the developers do not need to buy more products to write the codes [4].

1.1 Comparison with existing systems

The EPSS has been compared with some other scheduling planners such as Google Calendar and the Windows 10 built-in Calendar app.

Google Calendar has a main menu on the left side, consisting of a simple calendar showing the current month, collection of event calendars such as our personal events, birthdays, reminders, tasks and even holidays in Malaysia. For example, certain events celebrated in this country (Holidays in Malaysia) such as the 15th General Election, Christmas and New Year's Day are highlighted in the calendar. The example of these features can be seen in **Figure 1**. The events that have passed the date will be grayed out. However, the user can untick the part of calendar if he does not want to see them. In this system, the user can create an event in which he can choose the date and time, add guests based on their Google emails, add location, description and edit visibility and notification of the event. The next function of Google Calendar is the user can view the calendar in various views of day, week, month, year, schedule and 4 days.

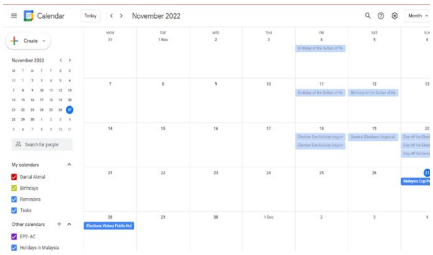

Figure 1: Google Calendar in Month View

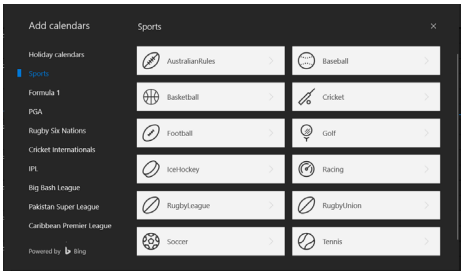

Figure 2: Windows 10 Calendar App

Next, we are going to elaborate about the Windows 10 built-in Calendar app. Much like Google Calendar, this app has a main menu on the left side, consisting of a simple calendar showing the current month, collection of event calendars such as our personal events, birthdays and holidays in Malaysia. The user also can add more event calendars such as holidays according to other countries and sports such as in **Figure 2**. These events can be hidden by unticking them. Much like other calendar app / system, the user can create an event in which he can choose the date and time, add guests based on their Microsoft emails, add location, description and notification of the event. This Calendar app also has

day, week, month and year views with some extensions. The "Day" view uses "Multi-Day views" that enables the user to choose the range of days from 1 day to 6 days in the current week.

Let's see the EPSS. The system consists of a customizable calendar, small notes, personal diary and manage account for the user. The calendar section of this system is quite simple compared to both of the systems described above. It briefly shows the monthly view, and the user can choose any date to access the "Day" view which shows the time of the day from 0:00 until 23:30 and each hour has 30 minutes discrepancy. The user also can create an event on the selected time and add the location, reminder, description and edit recurrence of the event as shown in **Figure 3**. Other than that, the calendar also enables the user to view previous and next month, or even similar month in the previous and next year. The second main function is small notes (refer **Figure 4**) in which the user can add, edit or delete as many small notes as possible. Next, there is a Personal Diary section where the user can create his "diary" by adding the title and write using the text box provided. The user will click the "Save" button on the upper right of the "diary" and it will lock the user from editing the text. When the "diary" is in Save mode, the text is locked from editing until the user clicks the "Edit" button which replaces the "Save" button as in **Figure 5**. The last main functionality is the Manage Account section which uploads the information of multiple users from the database. The users can view their username, email and password here and also add new profile, edit and delete the information from the system. These details are shown in **Figure 6**.

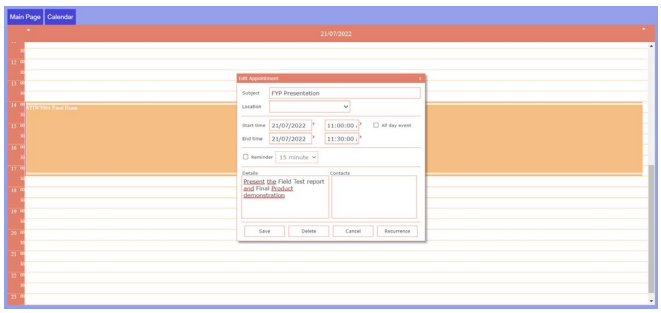

Figure 3: Creating or Updating Event

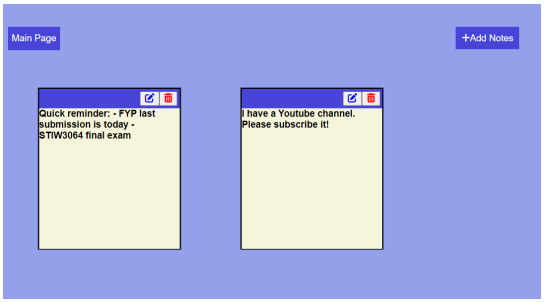

Figure 4: EPSS Small Notes

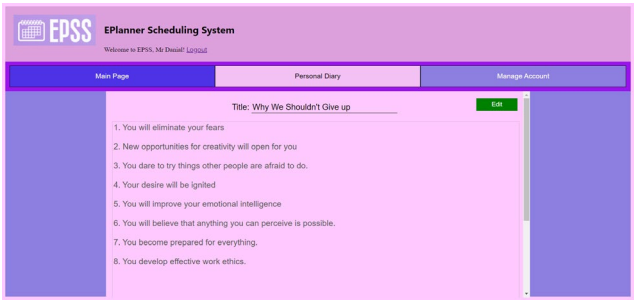

Figure 5: The Personal Diary in Save Mode

Figure 6: EPSS Manage Account Section

2. Methodology

The methodology used to conduct this project is the Rapid Application Development (RAD). This is because the RAD enables the creation of a prototype in a shorter time and it is easier for us to make amendments or update the system from time to time. The developer can perform multiple iterations and make improvements to the project without the need to develop from scratch every time there is a change in the development schedule [5]. Next, the cycle time of the project could be reduced through the usage of reusable existing components. Another advantage is the methodology provides greater feedback that may help in improving the software quality and customers' satisfaction [6]. In the first stage, we need to determine what we are going to do and design especially processes and functionalities. For the second phase, we need some ideas to be collected and a working prototype is to be developed including the interface design and the system's features. We plan to establish distinct interfaces for different features. The main interface of the application features a customizable calendar and small notes. Users can edit the calendar by marking important events and the events will be alerted through notification when the due date arrives. Secondly, there will be a "diary" section for users to write notes they desire to express their ideas. After the completion of the prototype from the previous phase, we developed the final and fully-functional product. This phase enables us to review the functionalities to be amended such as anything beneficial or harmful, what to keep or what to remove from the system according to skills, constraints and budgets. Lastly, the functionalities and user interface are tested thoroughly to ensure that they can work together without errors and entanglements. This cutover phase also demands us to perform tests and quality checking to ensure the system works well from A to Z and the visible defects are fixed. Other than that, the client will perform acceptance testing in the aspects of maintainability, stability, and usability of the developed software so the system meets his requirements.

3. Results and Discussion

The usability evaluation is used in order to obtain the users' reviews and their perspectives regarding the usability and functionalities of the EPSS. The Google Form questionnaires are distributed to 42 university students for field testing purposes. The participants consist of various ages and current semesters, with the majority of them being Semester 2 students (47.6%), followed by Semester 6 (31%), Semester 4 (14.3%), and Semester 7 and above is the least (7.1%). Most of the respondents (18 people) strongly perceived the EPSS as good in appearance, while only 1 person strongly disagreed with the statement as shown in **Figure 7**. Besides, based on **Figure 8**, 21 respondents (50%) agreed the EPSS fulfills their requirements, while 6 respondents viewed the statement neutrally. Regarding user satisfaction, a vast percentage of respondents (83.3%) perceived the EPSS system works well as they expected. **Figure 9** shows the corresponding information.

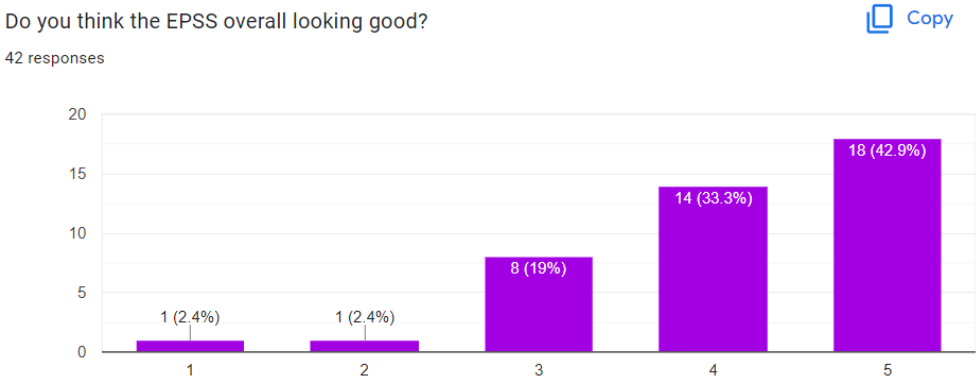

Figure 7: Results on Overall Appearance of the EPSS

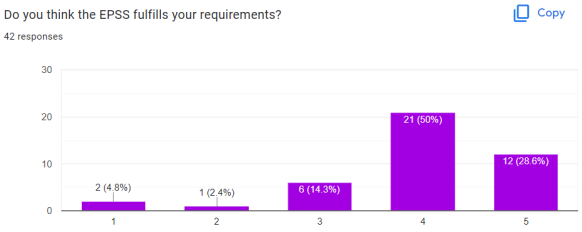

Figure 8: Results on Whether the EPSS Fulfills Users' Requirements

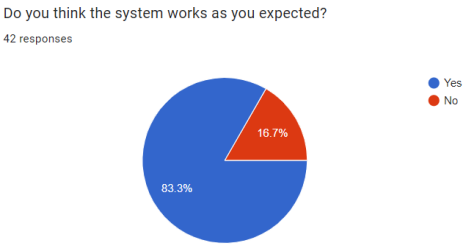

Figure 9: Respondents' Feedback Whether the EPSS Works as Expected

4. Conclusion

In conclusion, the EPSS is developed in compliance with the expected time and requirements and evaluated to provide a systematic platform for students to arrange their schedule, work and daily routine. Based on the results from the usability evaluation, the EPSS received various reviews from the respondents, but most of them perceived the system with good reviews such as having a good, nice-looking appearance, fulfills requirements, works as expected, being user-friendly and easy to use. However, some of them provided a few suggestions for the system such as improving the user interface and layout to make the system more appealing to the users.

References

[1] A. Woods, "5 Reasons Why a Daily Planner Is Essential," Flux Magazine, 19-Apr-2021. [Online]. Available: https://www.fluxmagazine.com/why-a-daily-planner-is-essential/. [Accessed: 18-Aug-2022].

[2] D. Directo-Meston, "RS Recommends: The Best Digital Planners for Organizing Your Paperless Life," Rolling Stone, 21-Dec-2021. [Online]. Available: https://www.rollingstone.com/product-recommendations/lifestyle/best-digital-planners-1110089/. [Accessed: 22-Jul-2022].

[3] P. Pedamkar, "What is Visual Studio Code?," EDUCBA, 11-May-2019. [Online]. Available: https://www.educba.com/what-is-visual-studio-code/. [Accessed: 18-Aug-2022].

[4] Prasanna, "Advantages And Disadvantages Of HTML | What is HTML?, Top 5 HTML Advantages and Disadvantages", 22-Feb-2022. [Online]. Available: https://www.aplustopper.com/advantages-and-disadvantages-of-html/. [Accessed: 22-Aug-2022].

[5] V. Singh, "What is Rapid Application Development Model (RAD)?," hackr.io, 26-May-2022. [Online]. Available: https://hackr.io/blog/rapid-application-development-model. [Accessed: 22-Aug-2022].

[6] "Software engineering," GeeksforGeeks, 07-Jun-2018. [Online]. Available: https://www.geeksforgeeks.org/software-engineering-rad-model-vs-traditional-sdlc/. [Accessed: 18-Aug-2022].