

PERSONAL PLANNER (PERPLAN)-MOBILE APPLICATION

KEVEENNIYA A/P MANOKARAN

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Permanent Address Block D, Vista Lavender Apartment, Persiaran Kinrara Seksyen 3, 47100, Puchong Selangor

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Table of Contents

LIST OF TABLES	ix
LIST OF FIGURES	x
LIST OF ABBREVIATIONS	xiii
ABSTRACT	xiv
CHAPTER 1: INTRODUCTION.....	1
1.1 Introduction.....	1
1.2 Problem Statement.....	2
1.3 Scope	3
1.4 Aim and Objectives.....	3
1.5 Methodology.....	3
1.5.1 Requirement Planning	4
1.5.2 User Design	4
1.5.3 Rapid Construction	4
1.5.4 Cutover	5
1.6 Significance of Project.....	5
1.7 Project Schedule	5
1.8 Expected Outcome	8
1.9 Report Project Outline	9
1.10 Summary	10

CHAPTER 2: LITERATURE REVIEW	11
2.1 Introduction.....	11
2.2 Review of existing systems	12
2.2.1 Google Calendar.....	12
2.2.2 Trello Digital Planner.....	17
2.2.3 ClickUp	20
2.2.4 Todoist Digital Planner.....	22
2.2.5 Touch ‘N’ Go (TNG).....	24
2.2.6 MAE by Maybank 2 U.....	26
2.3 Comparisons Between Existing systems and Proposed system.....	28
2.4 Tools and Technologies used to develop proposed system.....	32
2.4.1 React Native.....	32
2.4.2 Firestore	33
2.5 Summary.....	33
CHAPTER 3: REQUIREMENT ANALYSIS AND DESIGN	34
3.1 Introduction.....	34
3.2 Rapid Application Development (RAD)	34
3.3 Requirement Analysis.....	36
3.3.1 Functional Requirements	37
3.3.2 Non-Functional Requirements.....	39
3.3.3 User Requirement and Analysis	40

3.3.4	Software Requirements.....	42
3.3.5	Hardware Requirements.....	43
3.4	System Design.....	44
3.4.1	Flow Chart.....	44
3.4.2	Context Diagram.....	45
3.4.3	Data Flow Diagram Level 0	46
3.4.4	Data Flow Diagram Level 1	47
3.4.5	Entity Relationship Diagram	53
3.4.6	Data Dictionary.....	54
3.5	Prototype	57
3.6	Summary.....	68
CHAPTER 4: IMPLEMENTATION AND TESTING.....		69
4.1	Introduction.....	69
4.2	Software installation and Configuration.....	69
4.2.1	Android Studio	70
4.2.2	Firestore from Firebase.....	71
4.3	Implementation of prototype	72
4.3.1	User Authentication Module	72
4.3.2	Tracking Activities Module	73
4.3.3	Create module	77
4.3.4	Update activities module	79

4.3.5	Delete activities module	83
4.3.6	Search event, reminder and to-do list module.....	84
4.3.7	Setup event budget module	85
4.3.8	Visualize finances for event module	87
4.4	Functional Testing	88
4.4.1	Registration Functional Testing	89
4.4.2	Login page functional testing	90
4.4.3	Search Mechanism Functional Testing.....	91
4.4.4	Tracking Mechanism functional testing	92
4.4.5	Add activities functional testing	93
4.4.6	Update activities functional testing	95
4.4.7	Delete activities functional testing.....	97
4.4.8	Browsing activities functional testing	99
4.4.9	Setup budget for events functional testing.....	101
4.4.10	Visualize finances for events.....	103
4.5	Usability Testing.....	105
4.6	Summary.....	110
CHAPTER 5: CONCLUSION AND FUTURE WORKS.....		111
5.1	Introduction.....	111
5.2	Project Objective Achievements.....	112
5.3	Project Limitation	112

5.4	Future Works	113
5.5	Summary	113
	References	114
	Appendixes	116

LIST OF TABLES

Table List	Page No
Table 2.1: Comparison of existing systems with proposed system	28
Table 3.1: Functional requirements of PerPlan app	37
Table 3.2: Non-Functional Requirements of PerPlan app	39
Table 3.3: Software requirements for Developers	42
Table 3.4: Software Requirements for Users	42
Table 3.5: Hardware requirements for Developers	43
Table 3.6: Hardware requirements for Users	43
Table 3.7: Data Dictionary of proposed system	54
Table 4.1: C.R.U.D functionalities description in Firestore	71
Table 4.2: Registration page functional testing result	89
Table 4.3: Login page functional testing result	90
Table 4.4: Search Mechanism functional testing result	91
Table 4.5: Tracking mechanism functional testing result	92
Table 4.6: Add activities functional testing result	93
Table 4.7: Update activities functionality result	95
Table 4.8: Delete activities functional testing result	97
Table 4.9: Browse activities functional testing result	99
Table 4.10: Setup budget for event functional testing result	101
Table 4.11: Visualize budget for events functional testing result	103
Table 5.1: PerPlan's Objectives and Achievements	112

LIST OF FIGURES

Figure List	Page No
Figure 1.1: Phase 1&Phase 2 timeline of proposed system	6
Figure 1.2: Phase 3 timeline of proposed system	6
Figure 1.3: Phase 4 schedule of proposed system	6
Figure 1.4: Phase 5& Phase 6 schedule of proposed system	6
Figure 1.5: Phase 7 schedule of proposed system	7
Figure 1.6: Phase 8&Phase 9 schedule of proposed system	7
Figure 1.7: Phase 10 &Phase 11 schedule of proposed system	7
Figure 2.1: Day layout of GCal in desktop	13
Figure 2.2: Day layout from mobile mode	13
Figure 2.3: Week view of GCal on desktop	14
Figure 2.4: Week layout from mobile mode	14
Figure 2.5: Month layout of GCal in desktop	15
Figure 2.6: Month layout in mobile	15
Figure 2.7: Schedule layout of GCal in desktop	16
Figure 2.8: Schedule layout from mobile mode	16
Figure 2.9: Trello board view from desktop	18
Figure 2.10: Trello board view from mobile	18
Figure 2.11: Trello template layout from mobile	19
Figure 2.12: ClickUp work space in desktop	20
Figure 2.13: ClickUp workspace in mobile	21
Figure 2.14: ClickUp workspace in mobile for completed part	21
Figure 2.15: Todoist homepage on desktop	22
Figure 2.16: Todoist landing page in mobile	23
Figure 2.17: Todoist daily achievement in mobile mode	23
Figure 2.18: GoInvest feature view in TNG	25
Figure 2.19: TNG GoInvest setup goals	25
Figure 2.20: MAE Tabung feature	27
Figure 2.21: MAE app with expenses feature	27
Figure 3.1: Flow Chart of proposed system	44

Figure 3.2: Context Diagram of Proposed System	46
Figure 3.3: DFD Level-0 for proposed system	47
Figure 3.4: DFD Level-1 for process 1	48
Figure 3.5: DFD Level-1 for process 2	49
Figure 3.6: DFD Level-1 for process 3	50
Figure 3.7: DFD Level-1 for process 4	51
Figure 3.8: DFD Level-1 for process 5	52
Figure 3.9: ERD of proposed system	53
Figure 3.10: Login page of proposed system	58
Figure 3.11: Sign Up page of proposed system	59
Figure 3.12: Default home page of proposed system	60
Figure 3.13: Day view of proposed system	61
Figure 3.14: Year view of proposed system	61
Figure 3.15: Setup view for event	62
Figure 3.16: Setup view for to-do list	63
Figure 3.17: Setup view for reminder	63
Figure 3.18: History and search view of event	64
Figure 3.19: Upcoming events of proposed system	64
Figure 3.20: Generated chart of events in proposed system	65
Figure 3.21: Setting view in proposed system	66
Figure 3.22: Logout view of proposed system	67
Figure 4.1: User Authentication module	72
Figure 4.2: Tracking event, reminder and to-do list in 'Daily' section	74
Figure 4.3: Tracking event, reminder and to-do list for 'Month' view	75
Figure 4.4: Tracking event, reminder and to-do list for 'Year' view	76
Figure 4.5: Create notes fragment	78
Figure 4.6: Create event, reminder and to-do list fragment	79
Figure 4.7: Update note fragment	80
Figure 4.8: Update event fragment	81
Figure 4.9: Update reminder fragment	82
Figure 4.10: Update to-do list fragment	83
Figure 4.11: Delete activities module	84
Figure 4.12: Search mechanism module	85

Figure 4.13: Setup budget for event	86
Figure 4.14: Visualizing finances module	87
Figure 4.15: Experience of respondents in using manual planner	105
Figure 4.16: Experience on using mobile application	106
Figure 4.17: Characteristics needed in a mobile application	106
Figure 4.18: Scale for 'User-friendly' characteristic	107
Figure 4.19: Scale for 'Attractive interfaces' characteristic	108
Figure 4.20: Scale for 'Interactive application'	108
Figure 4.21: Scale for 'Easy Navigation'	109
Figure 5.1: Overall Chapter 6 representation	111

LIST OF ABBREVIATIONS

Abbreviations	Definitions	Page No
App	Application	all
DFD	Data Flow Diagram	44-48
Descript.	Description	53
ERD	Entity Relationship Diagram	51 & 52
GCal	Google Calendar	11-15
RAD	Rapid Application Development	4, 8, 34-35
TNG	Touch 'N' Go	23 & 24
PerPlan	Personal Planner	all

ABSTRACT

This project is a mobile application called PerPlan. The main purpose of developing the PerPlan is to cater features like tracking activities daily or monthly, managing and tracking finances of events as well as generating graphs to visualize the finances of an event in one platform instead of alternating apps back and forth for these features. There are also features that enable the user to retrieve backdated activities in the system with a simple search mechanism. This search mechanism, in turn, will fetch details according to the types of activities from the database. Besides that, there are challenges in the proposed project which are structuring logic for tracking daily activities, managing finances based on existing events, and appropriate graphs to visualize data. The existing issues of digital planners in the current market is the stepping stone to the development of PerPlan. Issues such as free limited features for usage like Google Calendar or orientated toward project management like Trello. User from different background or field of work finds it difficult to comprehend how to use these planners. Free accounts can only be used for a specific timeframe. Thus, these are the reasons which have contributed to the development of this project. In order to solve these issues, the PerPlan app is the solution since it is designed in a way that has the capability to resolve most of the issues. For a user to utilize the offered features in this project, they are required to have a registered account in the system. PerPlan is built using the Rapid Application Development method since it does not consume time as much as other approaches. This method is chosen because it is iterative in nature and able to support application development in a short timeframe. It also allows the developer to make changes as the project progresses which affects the project schedule.

ABSTRAK

Projek ini ialah aplikasi mudah alih yang dipanggil sebagai PerPlan. Tujuan utama yang menyumbang kepada pembinaan aplikasi PerPlan adalah untuk memenuhi ciri seperti aktiviti penjejakan harian atau bulanan, mengurus dan menjejak kewangan seperti belanjawan serta menjana graf untuk menggambarkan kewangan dalam satu platform dan bukannya dengan berulang-alik beberapa aplikasi untuk ciri-ciri yang dinyatakan ini. Terdapat juga ciri yang membolehkan pengguna untuk mencari semula aktiviti yang lepas dalam sistem dengan mekanisme carian yang mudah. Mekanisme carian ini, seterusnya, akan mengambil butiran mengikut jenis aktiviti daripada pangkalan data. Selain itu, terdapat cabaran dalam membangunkan projek ini. Cabaran seperti menstruktur logik untuk menjejak aktiviti harian, mengurus kewangan berdasarkan peristiwa sedia ada dan graf yang sesuai untuk menggambarkan data yang menitikberatkan ciri mesra pengguna. Terdapat juga isu-isu perancang digital yang sedia ada dalam pasaran semasa, dijadikan sebagai batu loncatan untuk pembangunan PerPlan. Contoh isu ialah ciri terhad percuma bagi penggunaan seperti Kalendar Google ataupun berorientasikan pengurusan projek seperti Trello. Pengguna dari bidang kerja yang berbeza mendapati sukar untuk memahami cara menggunakan perancang digital sebegini. Jika pengguna ingin merasai ciri-ciri tersebut, mereka dikehendaki untuk membeli akaun premium. Terdapat juga, akaun pengguna terhad bagi jangka masa tertentu. Oleh itu, ini adalah penyebab yang telah menyumbang kepada pembangunan projek ini. Untuk menyelesaikan isu-isu, aplikasi PerPlan ialah penyelesaian sesuai kerana ia direka bentuk khas bagi untuk menyelesaikan isu-isu timbul. Bagi pengguna untuk menggunakan ciri yang ditawarkan dalam projek ini, mereka dikehendaki mempunyai akaun berdaftar. PerPlan dibina menggunakan kaedah Pembangunan Aplikasi Rapid kerana ia tidak memakan masa seperti pendekatan lain. Kaedah ini dipilih kerana ia bersifat berulang semasa dibina dan mampu menyokong pembangunan aplikasi dalam jangka masa yang singkat. Ia juga membolehkan pengaturcara untuk mengubah dan menambahbaikkan pengekodan yang sedia ada tanpa menjejaskan jadual projek.

CHAPTER 1: INTRODUCTION

1.1 Introduction

Personal Planner Mobile Application (PerPlan) is an unconventional planner that is not limited to track daily notes, events, to-do lists or reminders, but also manages finances of the events. This app provides features such as setting reminders, to-do list for daily, weekly or monthly basis and setup. In the PerPlan, managing finances of the event starts from setting events, then it enables the user to setup estimated amount that includes allocation and expenses within the amount limit. The users able to track their finances via graphs. Thus, the event should consist of important keys in order to track the right finances that has been set aside by the user. Data visualization of the event is important for PerPlan, since, the data from estimated allocation and estimated expenses should be displayed in precise, easy to comprehend and concise.

Google Calendar planner is one of the infamous planners, commonly used by employees and students. It is stated as perfect choice of planner in terms of setting meeting and appointment in the calendar (Best Planner Apps for Daily Planning in 2022, n.d). However, there are few limitations found within Google calendar in the aspects of design. Disadvantages like difficult to read if it has too many appointments and possibly enables others to view the activities or schedule (Advantages/Disadvantages - Toolbox-Google Calendar, n.d.). As for PerPlan app, there will be an option to optimize view of the reminders, to-do list and notes through pagination or slider where users can slide to other page easily. As for privacy, only the owner able to manage and view the planner.

Personal Planner is an application based on mobile development. Hybrid method gives a way for the application to be developed using HTML, CSS, and JavaScript (Enihe & Joshua, 2020). As a developer with no prior experience, it is easier to develop as hybrid mobile application instead of native application. Besides that, it takes less time for completion and native application requires the use of specific programming languages depending on operating system (Enihe & Joshua, 2020).

1.2 Problem Statement

Based on this project, there are three main problems that could be extracted and investigated. First problem is to deduce and define logics behind tracking daily and monthly activities as well as backdated activities used in existing system like setting reminders, to-do list and notes with accuracy. Logics like how can the system inform user on the to-do list and reminders of a particular date. Second problem is to deduce and define logics on how to manage and keep track of finances (estimated allocation, estimated expenses and balance) with respective events generated by existing systems. In existing systems like TNG, there is a graph used to represent quantifiable data input by user. Thus, the third problem is that to display and represent data in quantifiable manner like graph similar like the existing system, TNG. The data representation should be user-friendly and easy to comprehend.

1.3 Scope

The user of proposed system is consisting of those who have registered to the system and are random users. This proposed system is built for all the users who wished to use for personal. PerPlan system has unique characteristic which is managing events that is been set. This characteristic is yet to be found in any other planners. In order to fulfill this requirement, one need to design a proper process flow of activities (reminders, to-do list, notes) that can be conducted within the planner and how first tier of activities connects to event feature in the system. Once event feature is utilized, the graphs or charts will be generated in the dashboard to show the information. Since, it is a mobile application, the framework to be used should cater codes reusability and widely available in the market.

1.4 Aim and Objectives

This proposed system has few objectives that is derived from the aim. Thus, the aim of this proposed project is to develop an app which can cater tracking activities which can be daily or monthly, managing and tracking finances of events like allocation and expenses and generating graphs that can help to visualize the finances of an event.

- a) To track daily and monthly activities of PerPlan.
- b) To manage and track finances of an event that is set.
- c) To visualize finances used for allocation, expenditure and balance of an event in graphical way.

1.5 Methodology

The appropriate methodology to be used for PerPlan app is Rapid Application Development (RAD). There are four (4) important stages which consist of: Requirement Planning, User Design, Rapid Construction and Cutover.

1.5.1 Requirement Planning

In this phase, one requires to do some research of the current problem that relates to the project. Followed by defining the requirements of the project based on the research that has been done (4 Phases of Rapid Application Development Methodology | Lucidchart Blog, 2018). After outlining the requirements, the project manager needs to finalize the requirements with project supervisor and get their approval.

1.5.2 User Design

After finalizing and getting approval from supervisor, then project manager needs to outline the scope for this project. Next step, is to build user design through prototypes (low fidelity diagram, mock-up, working model). For this part, it requires a potential user to work together with the developer in order to fulfill the requirements structured with the user design. The bugs that appear during this phase can be sorted through iterative process (4 Phases of Rapid Application Development Methodology | Lucidchart Blog, 2018). Thus, this process benefits the developer to make changes to the model as it is in progress until it reaches a satisfactory design.

1.5.3 Rapid Construction

This phase takes in the prototypes and beta systems depending on project scope, converts them to working model. Since, majority of issues are solved and addressed during design phase, hence, the developer able to construct final working model. Once, final working model is completed, the developer able to proceed to unit, integration and system testing (4 Phases of Rapid Application Development Methodology | Lucidchart Blog, 2018). This step is mainly to test out the system whether it is working according to the expectations and objectives. For this project, functional testing considered to be passed once it fulfills 3 objectives as stated.

1.5.4 Cutover

This phase is also known as implementation phase where the product goes for launching. This phase includes data conversion, testing (UAT), changeover to new system if it necessary and user training (4 Phases of Rapid Application Development Methodology | Lucidchart Blog, 2018). As for this project, implementation phase can be concluded if data conversion is done and final changes if there are any bugs found in the system.

1.6 Significance of Project

The main aspect to choose this project is to improve the existing planner attributes with unique yet important feature that serves the purpose of planner. This project has challenged ones to take upon the current defects in the available planners and enhance it for an improvised version. Planners need to remind and help the users to track their daily activities (events, reminders, to-do lists and notes) with precise information. Managing finances feature is available in financial apps like TNG and Maybank2u. However, there is no proper flow on how certain graphs are created by the user for tracking.

1.7 Project Schedule

Project schedule is an estimation of time to complete certain tasks. As for proposed system, there are five important stages with tasks that required to be completed within given time.

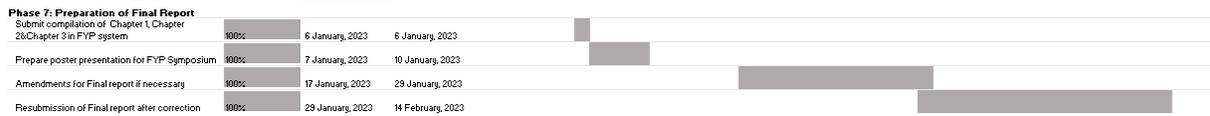


Figure 1.5: Phase 7 schedule of proposed system

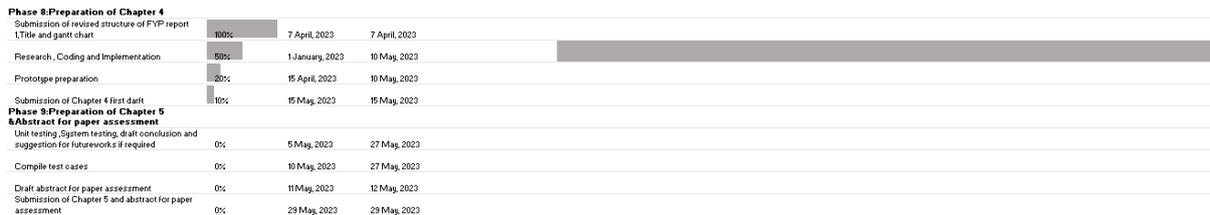


Figure 1.6: Phase 8 & Phase 9 schedule of proposed system

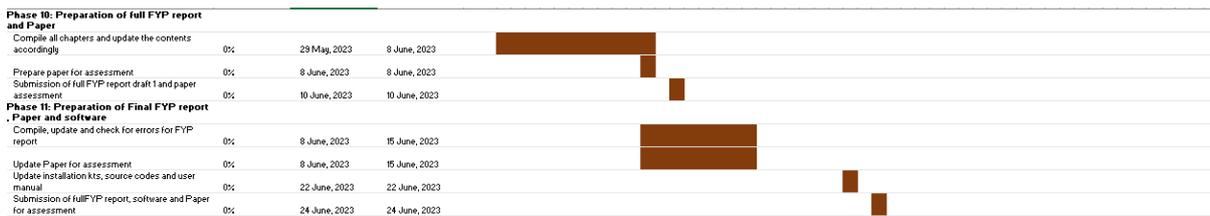


Figure 1.7: Phase 10 & Phase 11 schedule of proposed system

1.8 Expected Outcome

At the end of this project, the project should be able to come up with a mobile application known as Personal Planner (PerPlan) where the users need to register in order to use the features offered by the application. This application is built to assist people for managing their daily activities and setup budget for an event. The minimum age requirement is 18 years old, since, the application deals with finances like allocation and estimated expenses. PerPlan is user-friendly mobile application where users able to navigate from one activity to another with a simple click. The application has designated location for notes. Besides that, to use the feature for managing finances like allocation and expenses, where one need to set an event and fill the key information that will be used later for tracking finances.