

Bachelors of Science in Information Technology

Gyalpo: རྒྱལ་པོ་མཆོག་གི་ཆེས་ཆེན་གྱི་ཆ་ཤིང་། Information Technology



**Proposal
For
Second Year Project
Bachelor of Science in Information Technology**

Shortcut Keys App

**Submitted by
SONAM CHOKI 12190080
BSCIT B**

Gyalpozhing College of Information Technology

Read carefully before filling the form.

1. Please do not alter the layout of the application form. Information must be filled in the spaces provided, under set format.
2. Guidance notes in various fields should not be deleted.
3. Required information should be duly filled in the specified fields.
4. Required heads/fields which are not relevant to the project should be marked **N/A** (Not Applicable) or left blank and should not be deleted.

Bachelors of Science in Information Technology
Gyalpozhing College of Information Technology

Guidelines and Forms

Submission Procedure

Duly filled proposal forms completed in all respects should be submitted in form of soft copy and a hard copy to project guide and project coordinator. On receipt of the applications the proposals will be evaluated by reviewer panel and proposal would then be defended by student groups. The project group may need to revise the proposal in light of the evaluator's recommendations.

For further information, please contact:

Project Coordinator

Mrs.Sonam Wangmo

Bachelors of Science in Information Technology
Gyalpozhing College of Information Technology

Table of Contents

Description	Page #
1. Project Identification.....	1
2. Scope, Introduction and Background of the Project.....	3
3. Aim and Objectives of the Project.....	5
4. Methodology.....	6
5. Benefits of the Project (Expected output/outcomes):.....	10
6. Risk Analysis/Feasibility.....	10
7. Project Approval Certificate.....	11
8. Reviewers Panel Comments.....	13
10. Project Schedule / Milestone Chart /Work plan.....	14
13. Report Writing Guidelines.....	15
Bibliography.....	16

Note: To update the table of contents, right click in the table and select '*update field*' and then select 'Update Entire Table'.

Application for Final Year Project

1. Project Identification

A. Reference Number:	
(for office use only)	
B. Project Title:	
C. Project Internal Guide:	
Name:	
Designation:	
Organization:	
Mobile # :	Tel. # :
Email:	
C1. Project External Guide:	
Name:	NA
Designation:	
Organization:	
Mobile # :	Tel. # :
Email:	
C2. Student Group Lead:	
Name:	Sonam Choki
Roll No:	12190080
Department:	Bachelor of Science in Information Technology
Mobile # :	17983097 Tel. # :
Email:	12190080.gcit@rub.edu.bt

Bachelors of Science in Information Technology
Gyalpozhing College of Information Technology

D. Organizations Involved in the Project:

(Please identify all affiliated organizations collaborating in the project, and describe their role/contribution to the project.)

D1. Industrial Organizations:

#	Organization Name	Role / Contribution
	NA	

D2. Academic Organizations:

#	Organization Name	Role / Contribution

D3. Funding Organizations:

#	Organization Name	Role / Contribution
	NA	

E. Key Words:

(Please provide a maximum of 5 key words that describe the project. The key words will be incorporated in our database.)

1. Shortcut keys
2. Search
3. Add Shortcut Keys
4. View Shortcut keys
5. Windows, Linux and Mac OS

F. Research and Development Theme:

Enable easy accessibility to information:

Shortcut keys application enhance a user for easy access to the information. This application will enable user to search the respective short cuts keys by entering the keywords or it will allow a user to scroll and find the keyword from alphabet order. Moreover, if a user want to add the shortcut keys which are not available in the application then user have privilege to add by registering or logging in the application.

G. Project Status:

(Please mark ☒)

- ☒ New ☐ Modification to previous Project
☐ Extension of existing project

H. Project Duration:

Expected Starting Date: 15 February 2021

Planned Duration in
months: 6 months

2. Scope, Introduction and Background of the Project

A. Scope of the Project:

System scope

1. User Registration

User have to register if they want to add shortcut keys which are not available in the application.

2. Add Shortcut keys

User can privilege to add shortcut keys.

3. Windows Dashboard

In this sections, all the shortcut keys for windows will contain.

4. Linux Dashboard

In this sections, all the short cut keys for Linux will contain.

5. Mac Dashboard

In this sections, all the shortcut keys for Mac will contain.

6. Search

It allows user to search for the shortcut keys they wanted by entering keywords.

7. About

This section of the application will provide information the app.

User Scope

Anyone can use this app.

Bachelors of Science in Information Technology
Gyalpozhing College of Information Technology

B. Introduction (Project Background and Literature Review, Current State of the Art):

(Detailed summary of what all has been done internationally in the proposed area quoting references and bibliography. Please note that this section demonstrates the depth of knowledge of the project team and builds the confidence of the evaluators about capability of the team in achieving the stated objectives.)

(Please describe the current state of the art specific to this research topic.)

Introduction

In recent years, the utility of computers and mobile phones has significantly improved, allowing users to perform more activities while on the go. Smartphones and computers have quickly taken over the world due to their user-friendly interface. This growth in utility has come at the cost of the devices usability in certain situations. The use of computers, mobile devices, and the Internet is at an all-time high, and it's expected to continue to rise as technology improves. Computers and mobile phones enhance a user to explore news, study and play educational games, watch tutorials online, database management, word processing and writing, and enable to create an own idea into arts and animations.

The importance of computers and technology in education has been well known. Furthermore, it has been discovered that the number of students who have access to home computers has been gradually growing. With the increase of computer users, a combination of one or more keys that executes a command in software or the operating system called shortcut keys was introduced. A shortcut keys enable a user to perform specific tasks. A computer users preferred to use shortcut keys as it makes easier to finish writing assignments. It encourages to type simple commands rather than using your mouse to navigate through a menu, which speeds up the respective job. However, searching the internet for shortcut keys for specific tasks and not finding them after a long time of searching causes a user to have an headache, eye strain and to losing interest in learning.

As a consequence, in this situation, my project is based on the application of shortcut keys array. Shortcut keys application helps users to check for unique shortcut keys without having to go to the internet or waste time. The main aim of this project is to create a shortcut key application that will allow everyone to have easy access to shortcut keys. This framework allows users to check for keys and add or exchange shortcut keys by logging in to the program. Moreover, Users can also search for their desired keys by entering the key words in the search box, which will show a list of short cut keys with similar key words. Furthermore, the user can find shortcut keys for any operating system, like Windows, Linux, and Mac. This system helps users to learn and scan shortcut keys at their leisure, anywhere, at any time.

Literature Review

Mobile Application

The significance of cell phones in our daily lives and activities cannot be overstated. This is due to the fact that cell phones are no longer the popular communication system they once were. Because of the numerous amazing features and opportunities that mobile phones offer, it has become the colossal center of attention for individuals and businesses alike. The advancement of mobile technology, the availability and accessibility of high-speed internet, and the impressive communicative interface in these devices have resulted in a whole new level of mobile computing experience. This is possible thanks to the development of mobile apps (mobile apps).

The cell phone has become an important part of so many people's lives today because of application to the point that it could be said that it aids in the organization of their lives. Apps for friends, related projects and activities, personal information, and potential events are all available on mobile phones. These files are completely stored on our phones and can be used to help us schedule our lives, allowing for better time management. Many applications, such as alarm clocks, reminders, to-do lists, and various notification apps, can be designed to meet our specific needs and requirements, making life more convenient, simpler, and efficient.

Shortcut Keys

A device shortcut is a combination of one or more keys that executes a command in software or the operating system. A keyboard shortcut is a collection of keys that you can click to perform a specific task on your screen. In written text, keys that are intended to be pressed at the same time. A user's efficiency can be improved by invoking commands with a few keystrokes; otherwise, it will only be accessible via a menu, a mouse, or some other tool. Shortcut buttons, also known as hotkeys, make it easier to complete your writing tasks. It speeds up your work by encouraging you to type simple commands rather than using your mouse to navigate through a menu.

In Windows, MS Word uses the Ctrl key along with another alphabet key for shortcut. There is no doubt in saying that computers have become a very important part of daily life. A frequent computer user knows about the keyboard shortcut keys. Computer Awareness is a common section in all of the country's bank, insurance, SSC, and RRB exams. In certain situations, the list of computer shortcut keys is a question that can be asked not only in the Computer section, but also in the General Knowledge section.

C. Challenges:

(Please describe the challenges, specific to this research topic, currently being faced internationally.)

Some of the challenges :

1. Lack of Android Studio App development skills.
2. Since anyone can view and add shortcut keys there would chances of users adding unrelated or inappropriate contents.
3. Deployment of application.

D. Motivation and Need:

(Please describe the motivation and need for this work.)

As the number of people who use computers increases, everybody prefers to use short-cut keys because it makes it easier to complete writing assignments, allows a users to type simple commands rather than clicking through a menu with your mouse, which speeds up the process. However, not knowing unique shortcut keys and having to check for them on the internet, even after spending a long time and not finding them, causes a user to lose interest in learning. As a result, the Shortcut Keys application was developed so that they can search for their desired shortcut keys simply by alphabetical order or by typing a keyword into the search box, saving time and increasing a user's learning interest.

3. Aim and Objectives of the Project

(Please write the actual aim of your project. Also, describe the measurable objectives of the project and define the expected results. Use results-oriented wording with verbs such as 'to develop..', 'to implement..', 'to research..', 'to determine..', 'to identify..'. The objectives should not be statements and should not include explanations and benefits. The objective should actually specify in simple words what the project team intends to achieve (something concrete and measurable/ deliverable). Fill only those objectives that are applicable to the proposed project.)

AIM : To develop an Android Application that provides easy access to the shortcut keys used for computer or laptop of any operation system such as Windows, Linux and mac.

OBJECTIVES :

1. Easy access to Shortcut keys
2. To save time without having to browse internet
3. To learn Shortcut keys
4. Increase their interest in learning
5. Finish task in minimum time.

4. Methodology

A. Development / Research / Test Methodology:

(Please describe the technical details and justification of your development and research plan and test plan and testing strategies. Identify specialized equipment, facilities and infrastructure which are required for the project and their utilization plan. The block diagrams, system flow charts, high level algorithm details etc. have to be provided in this section. Also, describe the overall methodology to be used for the particular research topic)

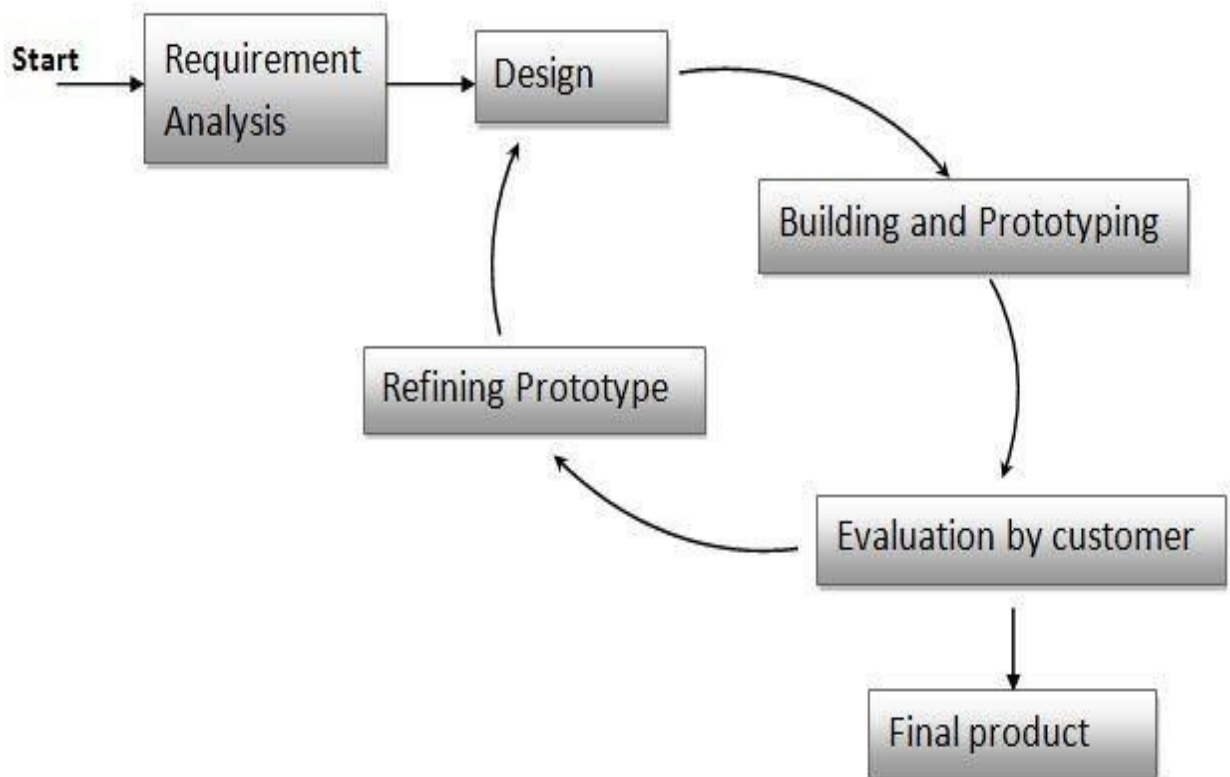


Figure : Prototype Model

Problem Statement

Literature Review

Documentation

Requirement Gathering

Requirement Analysis

Design

UI Design

Database Design

System Design

Implementation

Implementation

Testing

Integration Testing

Shortcut keys App

Figure : Methodology

Prototype model is a software development model in which prototype is built, tested, and reworked until it satisfies the customers. This prototype is used where the project's requirements are not known in detail at the beginning of the projects. It is an iterative, trial and error method which takes place between developer and client.

The above prototype model requirements of the system are defined. Requirement analysis will be done by Survey Report, Use Case diagram, Activity diagram and class diagram. In the design, Simple UI design with basic features will be created. In building prototyping, small working model from the above design made. From the review, I will refine my prototype until all the requirements of system are met.

For my project, the above methodology diagram will be used. Firstly, the information will be gathered via survey form asking if they having trouble browsing internet to find the respective shortcut keys . Secondly, I reviewed related papers to learn more about my project. After reviewing the literature, I will gather on how my project can operate and what features can be added to solve user's problems.

Then in the stage of requirement collection where the information will be collected through different methods such as brainstorming and conducting suitable survey. And documentation process along with the requirement gathering phase. To the project text, any required details will be added. After analyzing the requirement gathering, the design stage will proceed where the database, app icon, user interface and system design will be designed by the project team. The next stage consists of the development of software, where different app features will be created. In order to ensure the functionality of each part, each feature will be checked through the testing process during development.

In system development, the creation of the app will be based on the method of prototyping for efficiency and effectiveness. In testing phase we will use two testing methods: unit testing for each component and integration testing to ensure proper functioning of the app as a whole. While testing if there are any issues encountered then the team will resolve the issue and test again. In the final phase project document will be created where it will describe the details about the Shortcut Keys application with user manual and fully functional application.

Bachelors of Science in Information Technology
Gyalpozhing College of Information Technology

B. Project Team:	
<i>Title / Position</i>	<i>Number</i>
Project Internal Guide	
Project External Guide	
Student Team Members	Sonam Choki 12190080
Others (please specify)	
Add more rows if required	

Bachelors of Science in Information Technology
Gyalpozhing College of Information Technology

C. Project Activities:

(Please list and describe the main project activities, including those associated with the transfer of the research results to customers/beneficiaries. The timing and duration of research activities are to be shown in the Gantt chart in Section 8.)

Following are the main activities for my project :

1. Literature Review
2. Planning
3. Do requirement gather and analysis.
4. Design
5. Develop Feature : Home page
6. Develop Feature : Windows Dashboard
7. Develop Feature : User Registration
8. Develop Feature : Linux Dashboard
9. Develop Feature : Mac Dashboard
10. Develop feature : About
11. Final Testing
12. Final Documentation
13. Report Writing

Bachelors of Science in Information Technology
Gyalpozhing College of Information Technology

D. Key Milestones and Deliverables:

<p><i>(Please list and describe the principal milestones and associated deliverables of the project. A key milestone is reached when a significant phase in the project is concluded, e.g. selection and simulation of algorithms, completion of architectural design and design documents, commissioning of equipment, completion of test, etc.) The timing of milestones is also to be shown in the Gantt chart in Section 8.</i></p>			
No.	Elapsed time from start (in months) of the project	Milestone	Deliverables
	-	Commencement of the project	
1	10/02/21	Topic Selection	Selection of the project topic
2	25/02/21	Literature Review	Literature Review
3	14/03/21	Requirement Gathering and analysis	Requirements
4	26/03/21	Design	UL Design
5	09/04/21	Coding	Coding
6	04/05/21	Testing	Testing
7	17/05/21	Final Documentation	Final Documentation
(Please add more rows if required.)			

5. Benefits of the Project (Expected output/outcomes):

Benefits of the project

Output

1. Shortcut Keys App
2. Documentation
3. Project Report
4. Research Paper (Includes survey)

Outcomes

- 1 . To learn Android Application development
- 2 To build management skills
- 3 Enable to learn Shortcut Keys

6. Risk Analysis/Feasibility

A. Risks of the Project:

(Please describe the factors that may cause delays in, or prevent implementation of, the project as proposed above; estimate the degree of risk.)

(Please mark <input checked="" type="checkbox"/> where applicable)	Low	Medium	High
Technical risk		<input checked="" type="checkbox"/>	
Timing risk		<input checked="" type="checkbox"/>	
Budget risk	<input checked="" type="checkbox"/>		

A1. Comments(Describe the risk):

Technical Risk:

Chances of losing the data on the project due to hardware or software failures of the Systems.

Developers tend to rush their design process in order to proceed to the next activity resulting in a less user friendly application.

Schedule Risk:

Not being able to achieve the milestone on the intended dates.

Risk Mitigation**Technical Risk**

The app should be developed with backwards compatibility which allows users with older versions of the android OS to use the app.

The data on the project will be backed up.

It will undergo integration testing for correct functioning to prevent such occurrences.

Schedule Risk

Following the time schedule very strictly without any interference.

Making development of this app as a first priority.

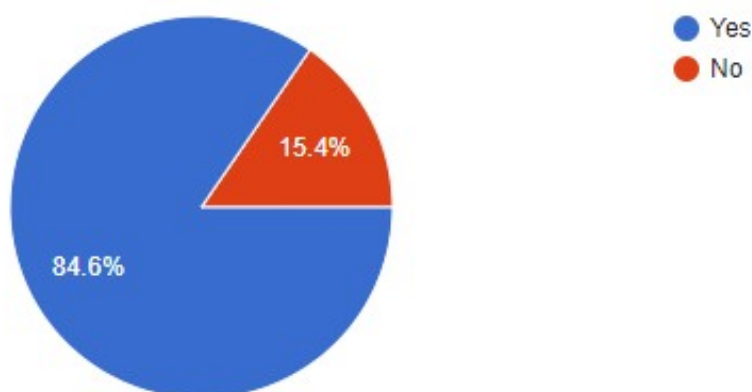
Feasibility

To check the feasibility study of Shortcut key, I did a google forms survey with following questions:

Question 1

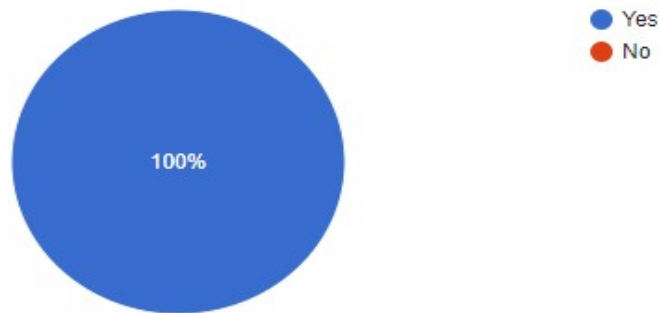
Do you use Short Cut keys when you are use your Desktop or laptops?

12/11/2020 10:00:00 AM



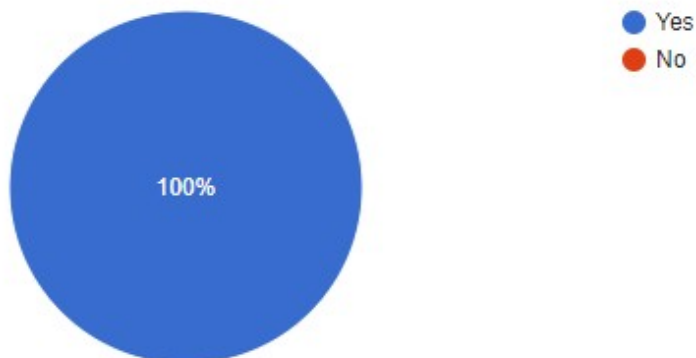
Question 2

Do you find difficulties finding short cut keys in browsers?



Question 3

Would you like to have an application that contains all kinds of short cut keys?



From this survey, I have concluded that there is need of shortcut keys application to enable a easy access to users.

Prototype

This is the main page of Shortcut keys application. There is three button as Windows, Linus and Mac as figure below. If we click any of the three buttons, it will take to their respective dashboard.

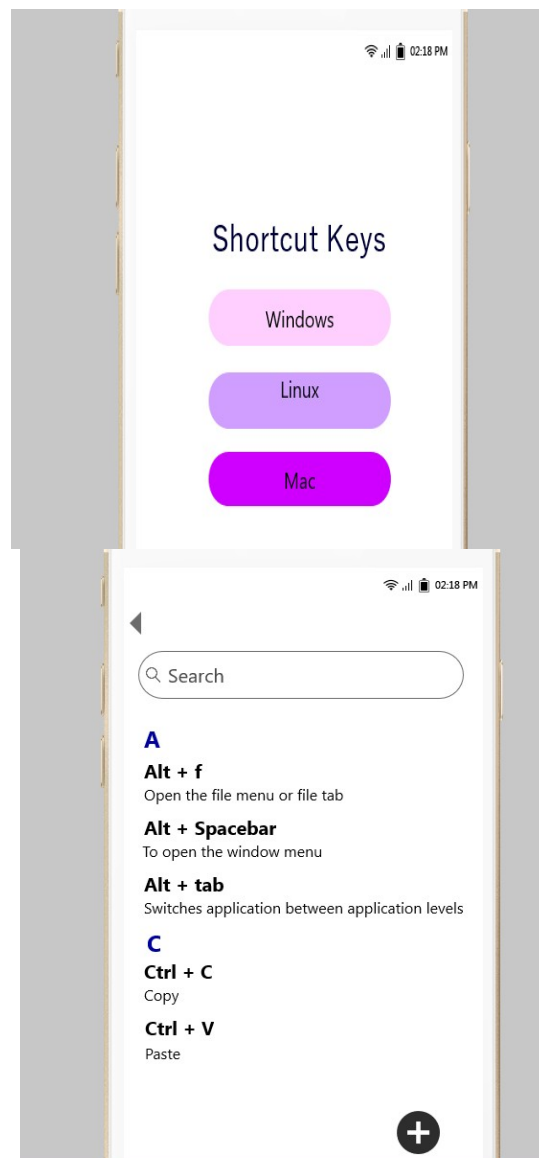


Figure : Main page

If you click windows button, then it will take a user into windows dashboard showing windows in alphabetical order with short description and allowing a user to scroll down shortcut keys.

Windows dashboard showing windows in alphabetical order with short description and allowing a user to scroll down shortcut keys.

Figure : Windows Dashboard

If a users want to search the desired shortcut keys in search button, then it will display all the keywords related to it. In the figure below, the keyword typed is copy and it have only one shortcut key related to copy keyword showing only ctrl + C. And there is back button in top right to go back to the previous page.

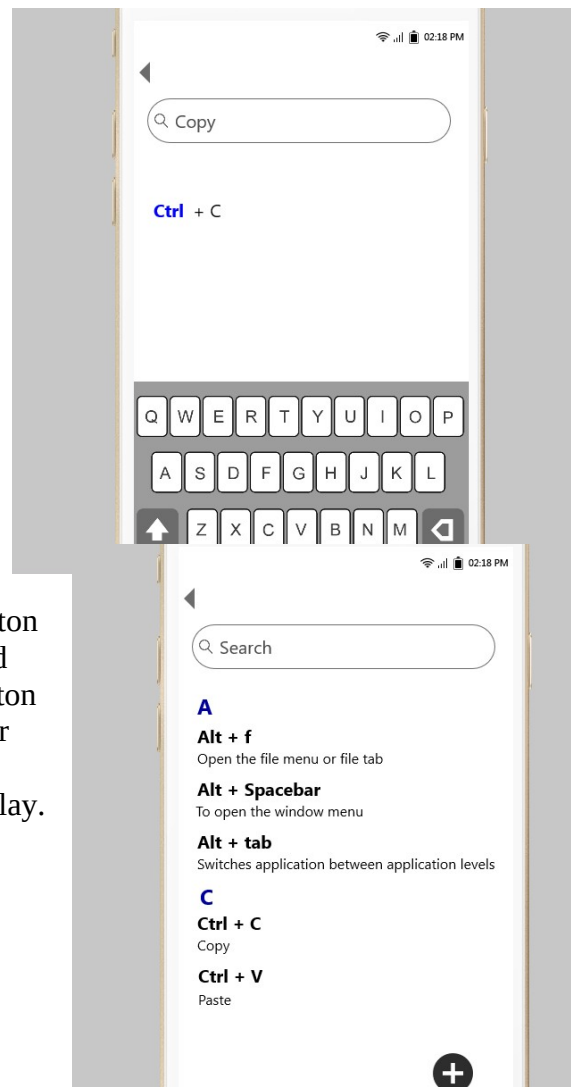


Figure. Search Button
If a user want to add
can click on the button
ton, it will popout or
Shortcut Key” as in
login page will display.

shortcut key then they
(+) . Onclick on the but-
display a text “Add
figure below and then a

Figure. Windows Dashboard

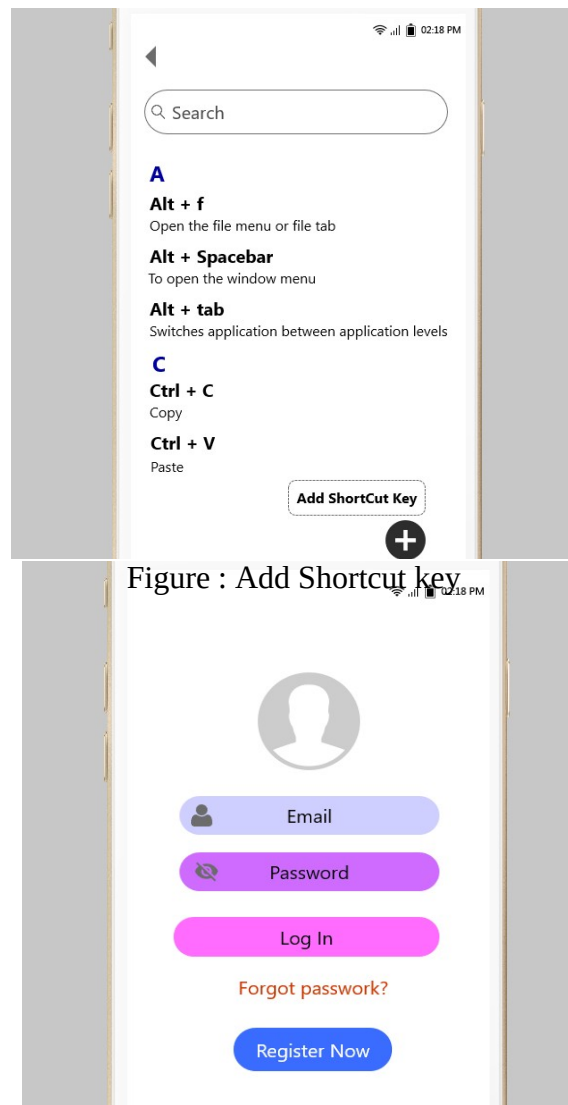


Figure: Login Page

If a user has not registered then they can register by clicking on “Register” on login page taking them to register page. After registration is done, it will take back to login page and allowing a user to log in.

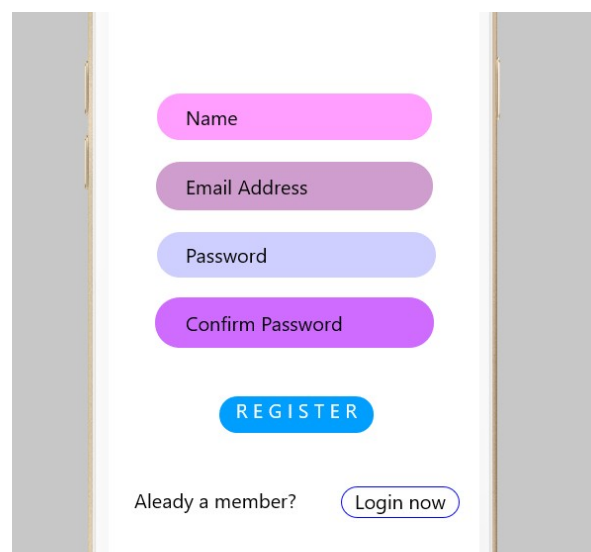
A registration form with a light gray background. It features four input fields: 'Name' (pink), 'Email Address' (purple), 'Password' (light blue), and 'Confirm Password' (purple). Below these is a blue 'REGISTER' button. At the bottom, there is a link 'Already a member?' followed by a 'Login now' button.

Figure : Registration page

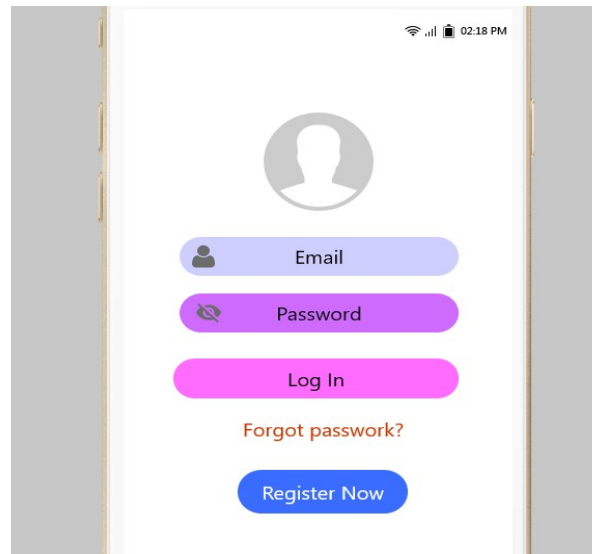


Figure. Login page

When a user is logged in, it will finally take a user to add shortcut keys sections. Allowing users to add short cut keys and then tab “OK” to add shortcut keys in the application.

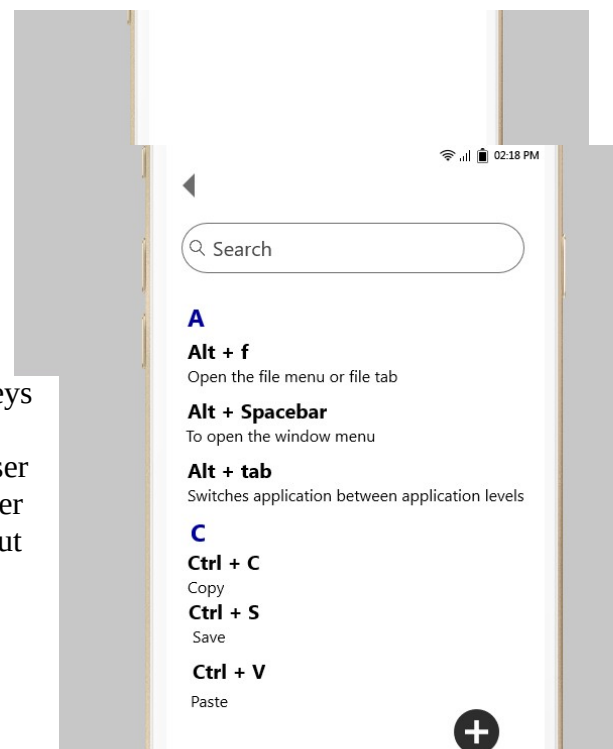


Figure: Add shortcut keys

The shortcut key that user play in the alphabet order entered a existed shortcut play as “Already

Page

entered in will dis- whereas if they have key then it will dis- Exist!!!”.

Figure : New added shortcut key page

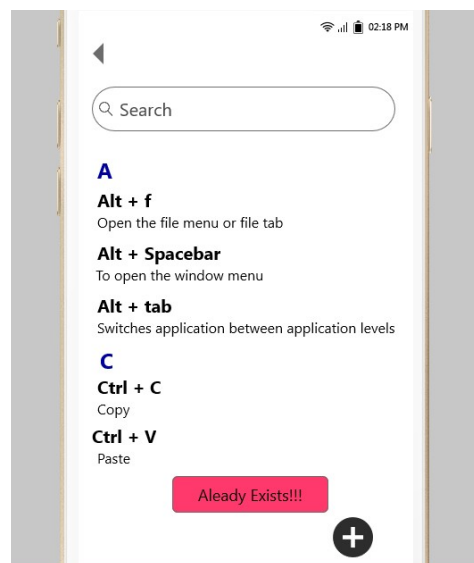


Figure : Shortcut key already exist message

If a user want to see the Linux or mac shortcut keys then user can go back main page by clicking the top right side button and taking them to main page.

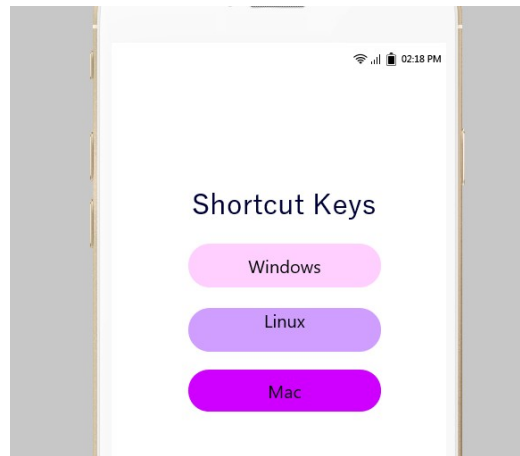


Figure: Homepage

If a user want to go to Linux button then same pages will be displayed but with respective OS shortcut keys.

7. Project Approval Certificate

(Approval of Project Proposal by the Competent Authority (Department Chairman) and Project Review Team is mandatory before the start of project execution.)

Project Review Team:

Sl #	Name	Signature
------	------	-----------

Bachelors of Science in Information Technology
Gyalpozhing College of Information Technology

(Please add more rows if required.)

Project Coordinator

Name:

Designation:

Email:

Date:

Signature:

Competent Authority – Head of Department

Name:

Designation:

Email:

Date:

Signature

& stamp:

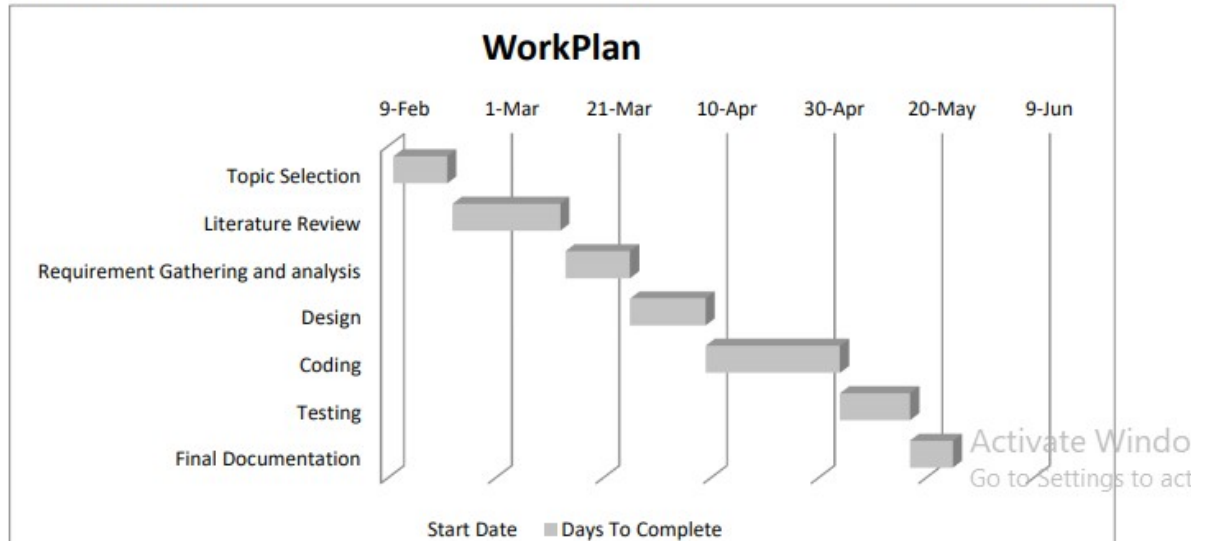
8. Reviewers Panel Comments

10. Project Schedule / Milestone Chart /Work plan

(Project schedule using MS-Project (or similar tools) with all tasks, deliverables, milestones, clearly indicated are preferred. Task should be measured in terms of hours)

Bachelors of Science in Information Technology
Gyalpozhing College of Information Technology

Activities	Start Date	Days To Complete	End Start
Topic Selection	10-Feb	10	20-Feb
Literature Review	21-Feb	20	13-Mar
Requirement Gathering and analysis	14-Mar	12	25-Mar
Design	26-Mar	14	8-Apr
Coding	9-Apr	25	3-May
Testing	4-May	13	16-May
Final Documentation	17-May	8	24-May



13. Report Writing Guidelines

(Project report will be written under the specified guidelines.)

Bachelors of Science in Information Technology
Gyalpozhing College of Information Technology

BYJU'S. (2021). *Important Computer Shortcut Keys for Government Exams*. Retrieved from <https://byjus.com/govt-exams/computer-shortcut-keys/>

Computer Applications for Managers. (2021). Keyboard Shortcuts. Retrieved from <https://courses.lumenlearning.com/wmopen-compapp/chapter/keyboard-and-keyboard-shortcuts/>

Lauman, D. J., (2014, February 24). Student Home Computer Use. Retrieved from <https://www.tandfonline.com/doi/abs/10.1080/08886504.2000.10782309>

Oza, H., (2017, March 28). The importance of Mobile Application In Everyday Life!. Retrieved from <https://www.hyperlinkinfosystem.com/blog/the-importance-of-mobile-applications-in-everyday-life>

Bibliography

Peres, S. C., Tamborello, F. P., Fleetwood, M. D., & Chung. P. (2004, September 1). *Keyboard Shortcut Usage: The Roles of Social Factors and Computer Experience*. Retrieved from https://www.researchgate.net/publication/252646472_Keyboard_Shortcut_Usage_The_Roles_of_Social_Factors_and_Computer_Experience