

## Student @ Hub – Android Application

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**Abstract**— this paper aims at making a student's life easier by providing them an app that allows interactive schedule planning.

**Keywords**— Digital planner, Android Smartphone, XML, java, Student Organizer, app

### I. INTRODUCTION

The emergence of smart phones has totally changed the very definition of mobile phones. Phones are hard to live without, as they do not just play the role of a communication tool but also a big part of people's everyday lives. Apps on mobile phones have added a new dimension to mobile users as they provide options for instant calling, easy payment services with top privacy policies, voiced navigations and remind users of important events, all at a click away. It is human to forget things but to cope up with this, one has to plan and work accordingly. Adopting a planner and organizing things to do is essential especially in a student's life. Planner usage helps one in improving time management, remember more, forget less, increase productivity, and decrease stress.

Upon carrying an online survey to understand if students preferred digital planner to paper planner, we received mixed responses. With the advancements in mobile devices and everything being available online, it is only certain why a digital planner would be preferred. The biggest advantage of these online services over the old-fashioned and obsolete pen and paper format of planning is the ability of these apps to synchronize with the calendar, contacts and multiple email accounts. In addition, it also allows sharing data with co-workers or project partners which prove to be convenient digitally and almost impossible to perform the same with a paper planner. Being aware of the current and advanced

technological improvements and making a switch to apps to organize one's day seems much more appropriate in this generation. It is only absurd to carry a paper and pen around these days that is not even close to being reliable.

There are numerous reasons to why such a physical device would prove to be dominating the digital worlds, namely quick editing, user friendly, minimal chances of losing data etc. The last thing one would need is a new software demanding attention for battery life and regular updates upon frequent notifications, alarms and messages. The hassle of creating an account every time an app installs is the reason why users prefer to look away from downloading these powerful planner apps. However, its huge benefit lies within that makes users to be at ease allowing them to just scribble down a meeting appointment and have a look at it as a widget on the homepage with reminders ready to trigger at the required time.

The proposed Student @ Hub mobile app will provide the need to switch from notebook planner by being user friendly, and serve students by providing an easy way to keep track of various course requirements, project deadlines, plan activities for the semester, alert them with a notification ahead of time and synchronizing their calendar to the app. With such features made easily available and fun to use, it is very certain that students will perform good and be successful at school as it promotes efficient time management and better planning.

### II. SCOPE OF THE PLANNER

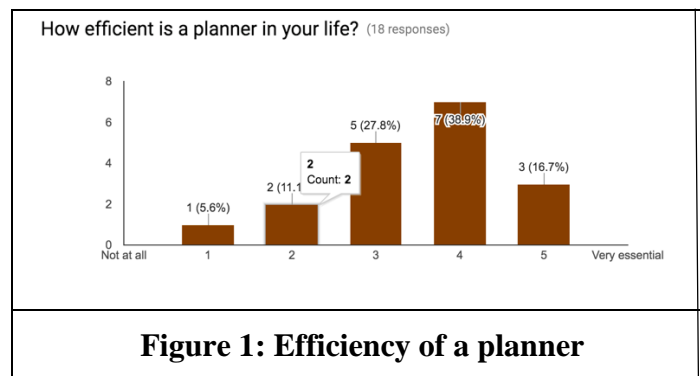
Taking flexibility, simplicity and accessibility into consideration, the app will develop into a user friendly and interactive tool for students, in order to provide them the feature to link the events to the calendar, selecting subjects with respect to the semester, reviewing due dates and options on how to

spend their time off during holidays etc. Adding a search bar would only make it easier for them to plan for events better. In addition, collaborating with others by sharing events and sending them an alert via email is one other useful feature that is present in this app. Using some features from popular apps such as Wunderlist and Evernote, we integrate this planner along with other interesting functionalities.

### III. PURPOSE OF THE APP

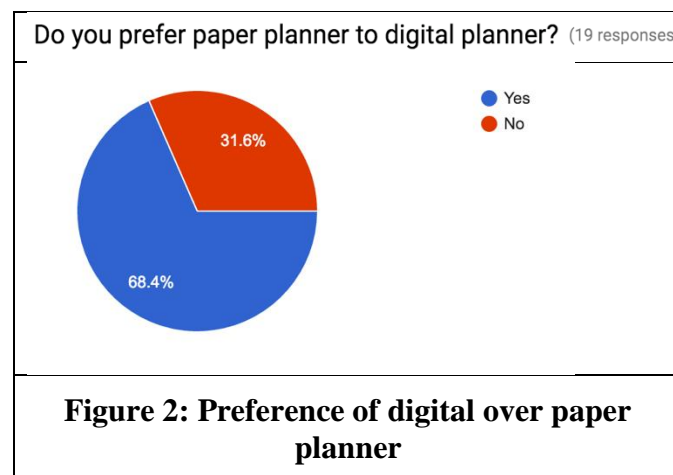
Students are constantly online these days to work on their assignments and projects. This only increases the need for them to download and use such an app, thus increasing the scope of this interactive digital planner. This app would enable them to plan their semester in a systematic way making them focus efficiently on their academic goals.

Some of us know how essential a planner is in our life. It would be a hassle to have things unplanned as it results in inefficiency of work and as one cannot focus on what needs more priority. This was validated by the results of the survey conducted for a set of students, providing 42.1% agreement towards how important and vital it is to depend on a planner.

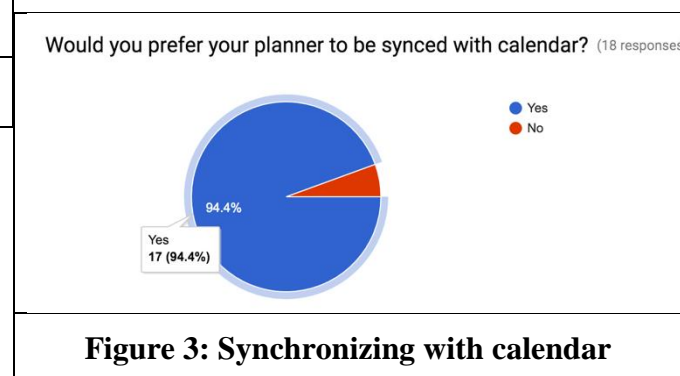


The motivation of this project was drawn from the results of the survey that questioned students about their preference towards digital planners over paper planners. The responses received leaned towards digital due to its high convenience and easy maintenance. Digital media planners allow nesting of tasks, changing dates quickly, due dates, reminders are some of the features that are not found in a paper planner. A digital planner allows one to go back to what was added before unlike a paper

planner that might get misplaced unless taken care of. This makes digital more reliable and preferred over a paper planner. With the emergence of mobile devices, carrying a pen and paper around to plan one's day leads to a lot of incontinence and makes it difficult to track tasks. The survey conducted for students at IUPUI gave us the following inference about the preference of digital over paper.



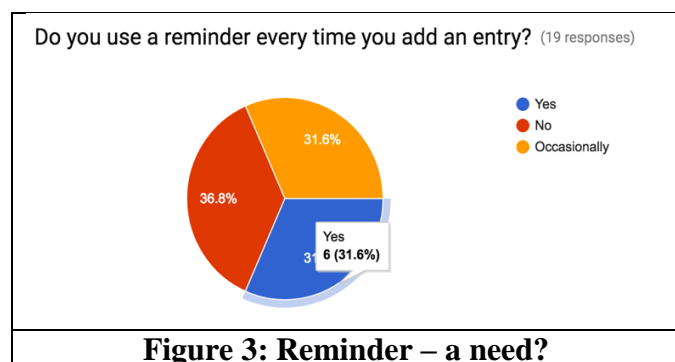
The ability to manage time and utilizing multiple applications across various platforms is a huge necessity. To keep track of events, one has to make a note of the event's date, time and location details in an app that allows planning, and requires the user to open the calendar separately in order for recollection. Now, if both these features were coupled in the form of one application is a lifesaver. The below survey shows positive response towards applications synchronizing with the calendar.



It is human to forget, this incompetency requires tackling. The feature of adding alerts and reminders only assist in carrying out the tasks with a guarantee

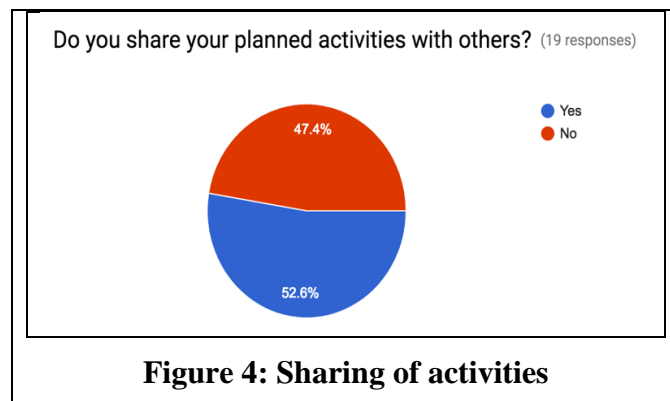
that it has to be completed due to the constant reminders popping up making it hard to miss a due date or a project submission.

A reminder can be as subtle as a notification or an alarm, which are not necessarily required for a day-to-day task. They are mainly necessary for those tasks that require something to remind. Mixed opinions were received from students for this area. Some suggested having just alarms for due dates and reminders/notifications for tasks carried out during a day is all they need. Notifications via push, email and in app notifications are supported by several applications.



Collaboration of ideas, tasks, project work are very essential in a planner application. As students we are constantly involved in many group activities, there is always a constant need to collaborate ideas on a platform that is accessible and manageable by the entire team. Sharing ideas, work progress with colleagues on a daily basis can be accomplished through a digital planner. Students have supported this area more than working professionals as they mostly communicated through weekly meetings while students do not really carry out those. This application allows the users to share between a group of people and allows the co-members to know the updates then and there. A lot of applications do not provide this feature in many phones.

This study gave us the idea of how sharing helps teams plan better. The following chart shows the result.



One of the striking features is accessibility on the go. These applications have the feature to be accessible on various devices such as iPhone, iPad, Mac, Android, Windows, Kindle Fire and the Web. These applications work seamlessly across all major devices to keep your life in sync.

Ability to take notes to share ideas and capture them via these applications is another interesting feature. Retrieval is made easy with guarantee of no loss of information. The survey led to the development of this application in the android platform.

#### IV. IMPLEMENTATION

The application used Android SDK for development, which is a software development kit that helps developers create applications on the Android platform. An Android SDK consists of a user-friendly environment with sample projects, set of source codes and various development tools along with an emulator that will allow the developer to visualize how the app would look like, as and when a block of code gets added which makes it efficient for the user to work on the app better. The reason for choosing Android OS is that it is very powerful and the development is mostly java and xml based whereas the Apple's iOS requires archaic knowledge on Objective C language and Mac-exclusive XCode development environment. The programmers must need the expensive Macintosh line of computers in order to develop any kind of application. Right from the way the app is developed to the place where the apps have to be uploaded, the programmers are free to develop and upload in

Google Play (Android apps store) compared to that of an IStore with lower burden of corporate policies.

In order to make the application user friendly, the screens were designed to implement a ubiquitous interface. Upon user click on the app, a loading screen appears with the logo in the centre and then opens a login/sign up page that allows user to register before using the application. The user can sign up providing details like name, email, username, and password and confirm password, which are then stored in the database tables as part of backend, that helps to authenticate the user when he/she logs in. The android monitor provides an in-built SQL developer called 'SQLite Manager' that helps to do database related tasks in combination with android studio allowing us to manage, store and retrieve tables. In this application, the database tables used are to store in the user inputs form the sign up page. Then download the file created after user has input each time from the Android Monitor and the values populated in the table that can be checked in the SQLite manager. These values are then accessed when the user clicks login to make sure the user is a registered user and then allows to view the home page. This provides the capability of having different students from numerous colleges to log in to this application from one or more devices. The homepage consists of the following tabs open up after login. They are,

- a) Semester
- b) Courses
- c) To Do List
- d) Events

For a student to add details and plan according to semester they are currently enrolled in, the semester tab allows them to choose between and then plan accordingly. The courses in a every semester are listed for choosing and a checklist enables students to select according to their course requirements and credit hours. This is added to the database so as to save the selection the next time they access the application. This allows future retrieval of information.

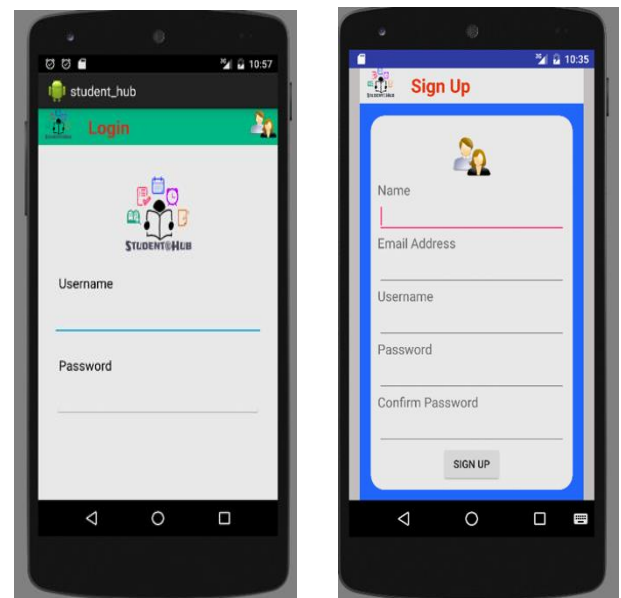
Every course would have project work, tests, exams and a schedule of its own. Users can create an event list about the activities held by their

department depending on the semester they are enrolled in. Student@Hub has a feature to synchronise events with the default calendar of the device. This is what stands out in our application over other basic planner applications. Multiple applications need not be accessed in order to look for an event. This app rather adds them to the calendar and alerts are sent accordingly so the user never misses an event or a task.

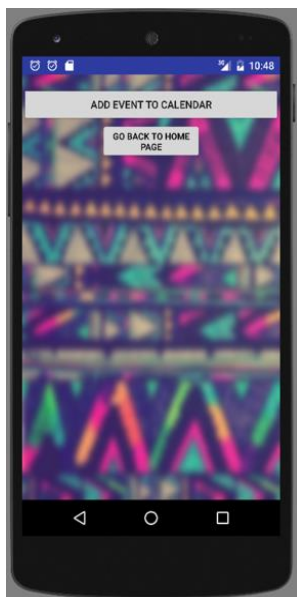
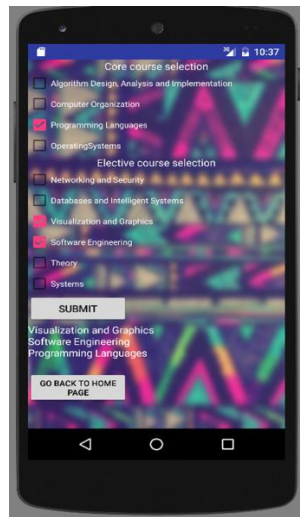
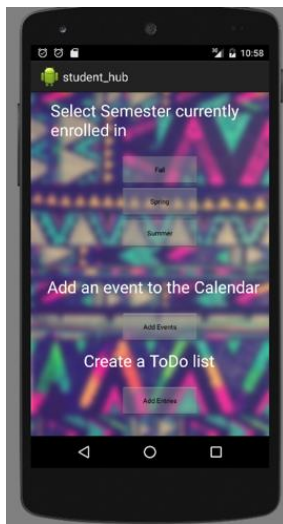
Another essential feature added to this planner application is the To Do list. This is not similar to adding an event rather it facilitates the user to add notes and tasks they feel necessary to accomplish during the day. The tasks that could be ranging from adding due dates, daily project completion information, tasks yet to be completed, etc. On completion of tasks, these can be deleted when long-pressed for a few seconds or double clicked on the screen.

The following are the results of the application to provide an idea of how the app looks when accessed by the user.

## V. RESULTS







The future work includes adding features that are more advanced and making them available for both iOS and android. A few UI features will be worked upon to make it more presentable and better in interface. The ability to log in using Google API as well as Facebook will also be developed. The application will be available for download very soon. The comparison between similar applications that are available today are discussed in the literature review section in order to show how this application varies with respect to the existing ones in the market, supporting both android and ios devices.

## VI. LITERATURE REVIEW

With numerous applications available today to plan and organize our day-to-day activities.

Wunderlist has the most striking features, such as calendar with alerts with pre-defined entries namely groceries, movies to watch, work, and inbox, although it is not widely known due to its lack of availability to other mediums but Apple. This poses a major drawback for its usage and its unfamiliarity. The Student @ Hub app is made available for every android user now and will be extended to other mediums as well.

Sticky Notes is one other application that is used in desktops, mobile phones and tablets that helps the user remember tasks and add checklists. Though it is famous and available everywhere, it does not have a reminder or alert system and it also does not synchronize with the calendar. The Student @ Hub planner application handles all these pitfalls.

## VII. CONCLUSIONS

The successful implementation of this application using Android Studio supporting the latest android version is available on all android supporting platforms, i.e., mobile phones and tablets. The running of this app on offline mode imparts the cloud feature for the application as the details entered during one running session adds directly to the database where it is stored for future logins.

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