Smart Slate
Screen writer

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***Abstract*: Heavy School Bags are a serious threat to the health and wellbeing of the students. It has a severe, adverse physical effect on the growing children which can cause damage to their vertebral column and knees. It also causes anxiety in them. Moreover, in the schools which are functioning in multistoried buildings, the children have to climb the steps with heavy School Bags, which further aggravates the problem and health consequences.**
This heavy load is caused by the fact that the children bring textbooks, guides, home work notebooks, rough work notebooks etc., to the classroom every day. Therefore, clear Guidelines of what to bring to the schools is required.
The load of a School Bag, as estimated in some of the Telangana districts, weighs about 6 to 12 Kgs at Primary level and 12 to 17 Kgs at High School level.
If all the schools adapt tablets in place of textbooks, it would be cost efficient as well as environment friendly. Taking notes on tablets would save paper. Presentations, assignments, tests and other projects could be more interactively handled in tablets. Motivation in students are also known to improve when they user technology in place of the traditional way.
We are proposing an android application which will replace textbooks with tablet

***Keywords:* School Bags, Touch Screen, Android Operating System (ver. lollipop 22 or above), Hardware: Android touch screen Mobile, Tablet or TV, Software: Android studio**

1. INTRODUCTION:

Tablets have taken over computers and laptops at work and textbooks in some schools in US. While we Indians are busy penning down the ill effects of technology on children, more advanced nations are equipping children at schools with tablets in place of textbooks. Can the same be adapted in Indian schools too in order to provide better learning assistance to children? There could be many advantages of replacing textbooks with tablets if we could take care of a few disadvantages that come along. Scientific studies have shown that school going children are more prone to learning stress and disheartening when they fail to keep up with the class. Multimedia learning has provided an edge for those that have difficulty in remembering what has been taught previously. Its a fun way of learning and keeps children interested in the subject with better illustrations and graphical descriptions. We tend we learn those things easily that keeps the interest level high.
We are going to propose all the possible way to replace textbooks with and android app. It will have subject wise separate storage. We will use a stylus to write anything on screen and store pages in local storage. It will help to share notes if someone missed the session.

2. LITERATURE SURVEY:

Existing system

The Telangana state government hence took up a survey on the School Bag load in some of the districts. Based on the Survey, an exercise has been taken up to arrive at the proper load of the School Bags and a Policy on home work and assignments. A Guideline has also been issued by the Telangana state government directing the Managements under the Government, Local Bodies, Aided and Un-Aided Private Schools in the State to implement these Guidelines to reduce the load of the School Bags
for Classes I to X, with effect from the Academic Year, 2017-18, onward.

Upper Primary Sections and Secondary Schools – Classes VI & VII and VIII to X

1. As per the State curriculum, six Textbooks have been prescribed for Classes VI & VII i.e., 3 language Textbooks and one Textbook each for Maths, Science and Social Studies. For Classes VIII to X, there are seven Text books prescribed i.e., 3 language Textbooks and one textbook each for Maths, Physical Science, Biological Science and Social Studies.
2. There shall be one note book of 200 pages for each subject for under taking Formative Assessment items such as textbook exercises, projects, slip tests, experiments etc. This too the children need not bring everyday to the school. There shall be one note book as rough note book for all the subjects to be brought everyday to the school and used for class work.

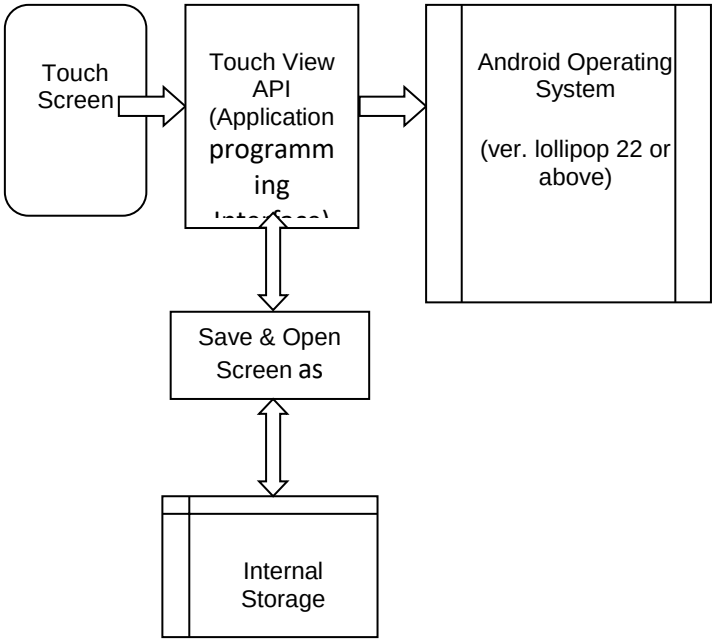
Implementation

Primary, Upper Primary and High School are to take the following steps also and inform the students and parents accordingly and also supervise the implementation of these steps, in order to reduce the load of the School Bags.
1. Inform the students in advance about the books and notebooks to be brought to the school on a particular day.
2. Inform the students and parents regarding appropriate kind of School Bags i.e. which have broad padded straps for symmetrical distribution of weight.
3. The students should always use both straps for carrying the School Bag and should not sling the Bag over one shoulder.

4. The students should keep the Bag down while waiting for the school conveyance or in the school Assembly.
5. The schools must ensure that students carry books only according to the timetable.
6. School Heads should counsel the parents and teachers about the health issues arising out of the children carrying heavy School Bags to school.
7. Schools should not prescribe additional and supplementary textbooks that are voluminous, costly and designed in a pedagogically unsound manner other than by SCERT.
8. Students should be encouraged to repack their bags on daily basis and avoid carrying unnecessary articles, textbooks and workbooks that are not needed.
9. The schools must frequently check the School Bags to ensure that the students are not carrying heavy Bags with unnecessary material.

Source : GO Ms No 22 Dated 18.07.2017 of the Telangana Government

3. METHODOLOGY



4. SYSTEM ARCHITECTURE

4.1. Touch Screen Technology

Touch screen technology is the direct manipulation type gesture based technology. Direct manipulation is the ability to manipulate digital world inside a screen. A Touch screen is an electronic visual display capable of detecting and locating a touch over its display area. This is generally refers to touching the display of the device with a finger or hand. This technology most widely used in computers, user interactive machines, smart phones, tablets etc to replace most functions of the mouse and keyboard.

4.2. Android Operating System

Android is a mobile operating system based on a modified version of the Linux kernel and other open source software, designed primarily for touchscreen

4.3. Memory management

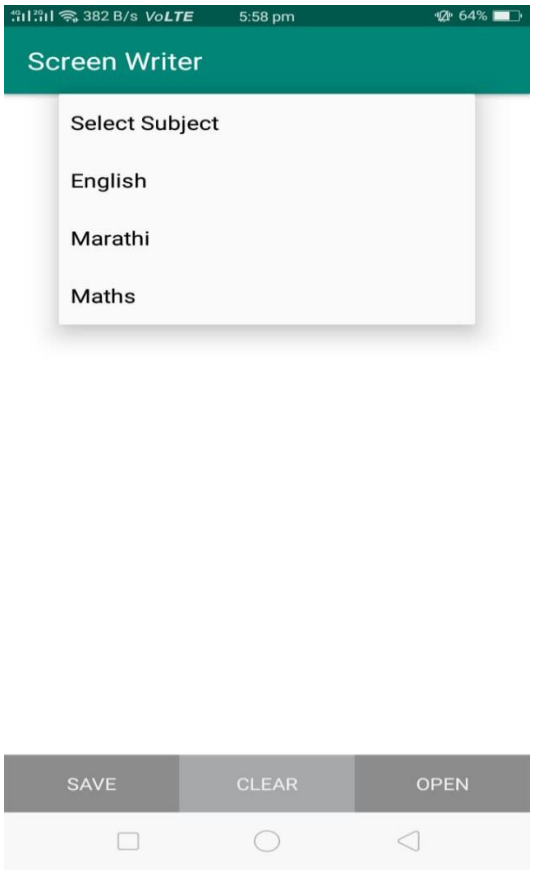
Since Android devices are usually battery-powered, Android is designed to manage processes to keep power consumption at a minimum. When an application is not in use the system suspends its operation so that, while available for immediate use rather than closed, it does not use battery power or CPU resources. Android manages the applications stored in memory automatically: when memory is low, the system will begin invisibly and automatically closing inactive processes, starting with those that have been inactive for the longest amount of time. Lifehacker reported in 2011 that third-party task killer applications were doing more harm than good

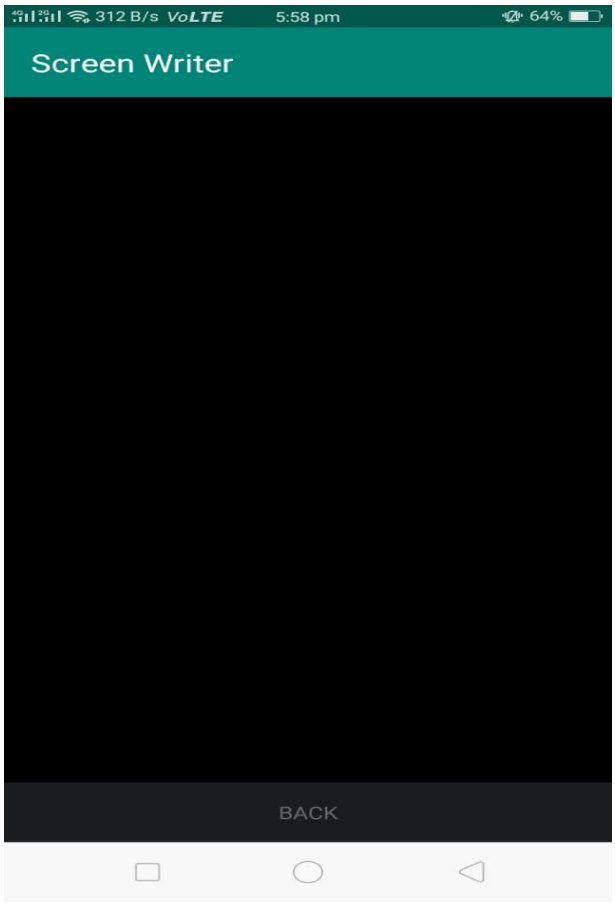
4.4. Your apps on the big screen

Android TV provides a complete TV platform for your app's big screen experience.
The **Android TV Input Framework (**TIF) allows TV apps to handle video streams from sources such as HDMI inputs, TV tuners, and IPTV receivers. It also enables live TV search and recommendations via metadata published by the TV Input and includes an HDMI-CEC Control Service to handle multiple devices with a single remote.

4.5. Screen Output

5. APPLICATION USED





6. PURPOSE:

The main objectives of this project is to reduce heavy school bags. Heavy School Bags are a serious threat to the health and wellbeing of the students. It has a severe, adverse physical effect on the growing children which can cause damage to their vertebral column and knees. It also causes anxiety in them. Moreover, in the schools which are functioning in multistoried buildings, the children have to climb the steps with heavy School Bags, which further aggravates the problem and health consequences.

7. SCOPE:

If all the schools adapt tablets in place of textbooks, it would be cost efficient as well as environment friendly. Taking notes on tablets would save paper. Presentations, assignments, tests and other projects could be more interactively handled in tablets. Motivation in students are also known to improve when they user technology in place of the traditional way. We are proposing an android application which will replace textbooks with tablets

SYSTEM EVALUATION

8. Advantages:

- Reduce heavy school bags load
- Paperless lesson keeping the environment clean
- Promote hybrid learning
- Save money
- Eco-friendly

9. Disadvantages:

- Student get addicted digitally
- They should carry tablet or mobile

10. CONCLUSION

Expected output:

Expected outcome from the proposed system is it should be helpful to reduce weight load of students. It should have proper user interface to handle any students easily. User friendly with digital interface and ultimately a smart slate is expected.

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