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**Optional Prompt: Looma**

Looma, developed by VillageTech Solutions ([villagetechsolutions.org/Education.html](http://villagetechsolutions.org/Education.html)), is a portable computer and projector box designed for use in schools in developing nations. It uses a wand to navigate the screen, like an electronic whiteboard. The computer runs Ubuntu, will run any web-app, and the hardware is extensible via USB. It provides Internet connection over any mobile data network and Wi-Fi. A number of Looma boxes have already been deployed in classrooms in Nepal. VillageTech Solutions is constantly looking for more educational content and applications for Looma, as well as hardware modifications to improve the tool. Looma boxes will be at the hackathon for students to work with and test their projects.



For an introductory slide show about Looma and VTS, click [HERE](https://drive.google.com/file/d/0BzO7kZ5_B9-xeU50ZFpYaWhZSVE/view?usp=sharing).

For more information on project ideas, click [HERE](https://drive.google.com/file/d/0BzO7kZ5_B9-xempOeW9kNEcwZlE/view?usp=sharing).

**Software Project Ideas** from Village Tech Solution’s Skip Stritter:

(Scroll to page 4 for **Hardware Project Ideas**)

1. Content Navigation

- load a lot of media files [e.g. RACHEL, Wikipedia edu, Khan Academy elementary school, etc]

- create a content management and navigation system

- Navigation Tool

- simple on-screen tools to quickly search, filter and navigate to media files

- Organization Tool

- include “management” tools for organizing large body of media files

- organize in folders perhaps

- tag media files as needed

- store navigation metadata in database for use with the Navigation Tool

2. On-screen keyboard

- english version

- nepali version

- number pad version

- allow to be opened up in any Looma screen

- inputs directly into a text or number entry field [like the answer box in arithmetic games]

- drag & drop and resizable

- dismiss keyboard with single button click

3. Time education

- clock games and drills, including how to read clock and how to do time arithmetic

- time-zone map of the world

- calendar/date converter

- What time is it in …..?

4. HIstory timeline visualizer

- general tool that allow panning across time, viewing and zooming in on history events

- timeline may be filled in from database meta-data for any history set [e.g. different subjects or geographies]

- with informational popups on hover over an event [stored in database]

- tool for creating and editing history event sets

5. Magnifying glass

- allows local zoom-in on any Looma page

6. More maps

- fuller set of layered maps of Nepal

- layers for cities, departments, mountains, rivers, agriculture, tribal/language areas,

- with informational popups on hover over a feature [stored in database]

- tool for creating and attaching info popups

- other maps [india, china, tibet, US, euro, africa…]

7. Web Browser

- [for schools that ARE on the internet]

- opening screen has thumbnails of pre-selected bookmarks

- allow adding bookmarks

- large-font search and easy to click buttons

8.Open-source EDpuzzle

- editing tool for enhancing videos

- take any video

- add pauses

- any pause can have media enhancement popups [review, quiz, more detail, …]

9. "Teaching Management System Lite”. Program for teacher to manage in-class tablets.

- can individualize what each tablet sees

- can push media files to each tablet for independent study or at-home work

- ability to see the screen of each tablet to monitor or to instruct

- ‘parental controls’ to keep students off the internet and not playing games

10. Improve speech capability

- works offline

- select text and click speak-it button

- follow the bouncing ball

- multiple voices

- nepali translation [? works offline?]

- button to read whole page [w/o select]

- ability to change “voices”

- nepali language reader?

11. Multi-player games

For more information multi-player games ideas, click [HERE](https://drive.google.com/file/d/0BzO7kZ5_B9-xN3RIT1pkMFU2SUE/view?usp=sharing).

- general framework for games for two teams to compete

- loadable with different data sets to create various games

- recording, scoring and awards system

12. Enhanced paint program

* add other features [different brushes, different shapes, text]

13. Web Cam Tool

- tool for managing webcam

- ability to record, playback, [simple] editing, and storage/categorization video

14. Timer/stopwatch Widget

- Button [with timer icon]

- Can be launched from any page with the button

- Pop ups a small/med (re-sizable, and DnD) dialog with the timer functions

- Timer value shows on screen and alarm sounds at the end of a countdown

- Another mode could be "time until..." style that counts down to a future event.

15. Tablet control for Looma

- allow teacher to control Looma from a [Android] tablet

- cursor control, click, right-click, double-click

- shows on the tablet screen the same image as is being projected

**Hardware Project Ideas**

There are several “hardware” projects on the list that could be done in 24 hours:

- we have a webcam in the Looma, but there is no application to control it, user interface for recording, app for saving and viewing videos, etc

- we want to have tablet access in the classroom for looma. two projects are mentioned in the project list

- teacher control of looma via tablet [mouse control, screen view, discovery], and management of tablet users [discovery, teacher push material to tablets, etc]. I have someone who is willing to loan tablets for the hack that projects can use. Let me know if and how many tablets would be useful to have on loan.

Looma has external USB ports, so anyone wanting to connect other devices and write code to use/manage them is welcome.