Low Cost FOSSEE Laptop of NMEICT

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It is well known that IIT Bombay has been executing a low cost tablet project, funded by NMEICT. Improving its capability is one of the mandates, so as to make the device more useful. In this report, we explain a laptop that has come out as a result of this exercise.

The laptop mentioned above has a 10" screen and a complete keyboard. It has nice features, such as light weight and long battery time, found only in expensive laptops. Although it does not have an inbuilt hard disk, we can easily use external hard disks, pen drives and SD cards. Our team at IIT Bombay has developed a modified version of the open source operating system Ubuntu, and named it as FOSSEE Operating System, eponymous with the open source software promotion project, also funded by NMEICT.

This device is supplied to us by a Delhi based company, Basics Comtech Pvt. Ltd. It is assembled in a state of the art plant in Manesar, Haryana. At present, it is priced at Rs. 7,500.

1. 10" screen, non touch
2. Complete keyboard
3. 1GHz dual core ARM v7 Processor
4. 1GB RAM
5. 8GB NAND flash
6. 32GB SD card slot
7. Two USB drives
8. One mini HDMI port
9. Ethernet port (RJ45)
10. 5,000 mAH battery
11. Wifi and bluetooth
12. Webcam
13. Audio ports
14. Light weight (less than 1kg)

As the operating system is a version of Linux, we pre-load the system with useful software packages and distribute them. A set of about 100 packages that are pre-loaded on the FOSSEE laptop is given in at this link. Some of the major programs are listed below:

1. C, C++
2. Java
3. Perl
4. Ruby
5. Python
6. PHP
7. Julia
8. Scilab
9. R, Rstudio
10. LibreOffice (writer, calc, impress, draw, math, base)
11. LaTeX
12. TeXworks
13. GIMP
14. Inkscape
15. Chromium
16. Firefox
17. Thunderbird
18. DWSIM
19. OpenModelica
20. eSim
21. Sandhi

We have also ported the following excellent content for offline use, available through an optional 32GB SD card, costing Rs. 1,000. For any one language, an 8GB card is sufficient.

- Wikipedia in 11 of our languages, containing a total of 5 lakh articles.
- More than 3,000 spoken tutorials dubbed in about 15 of our languages.

It has been successfully used by the first year B.Tech students of IIT Bombay in the first programming course CS 101. We present some pictures and screenshots of this Laptop next.

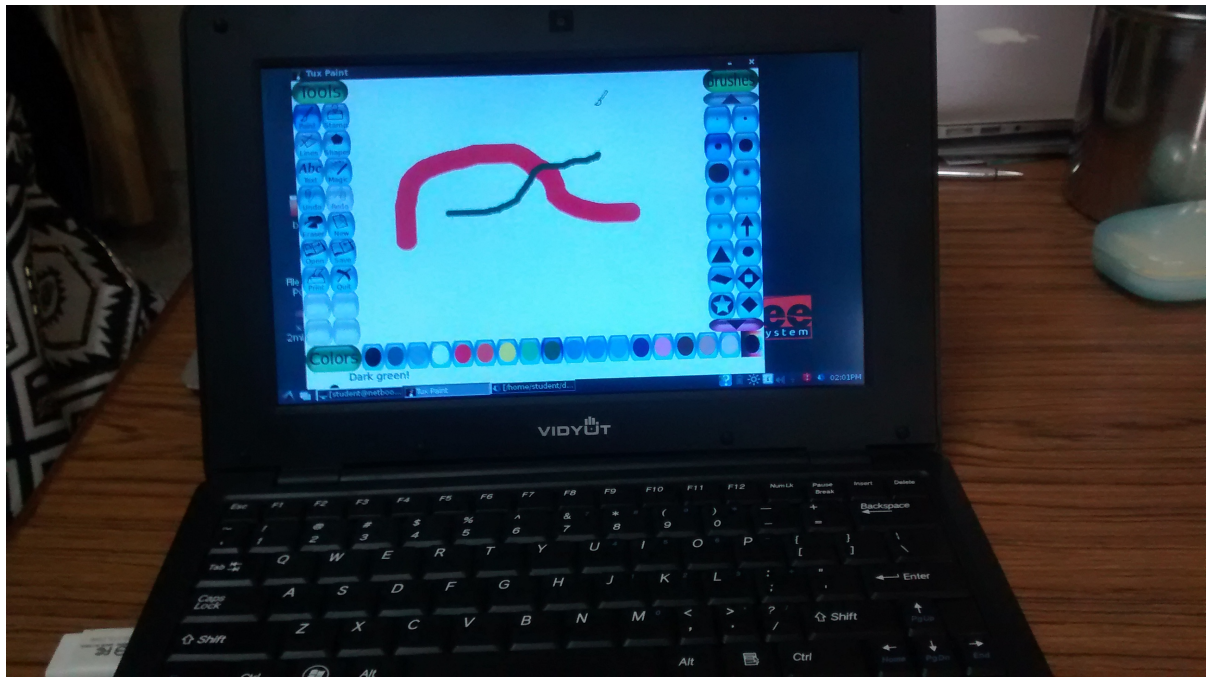Figure 1: The Laptop, as seen from outside

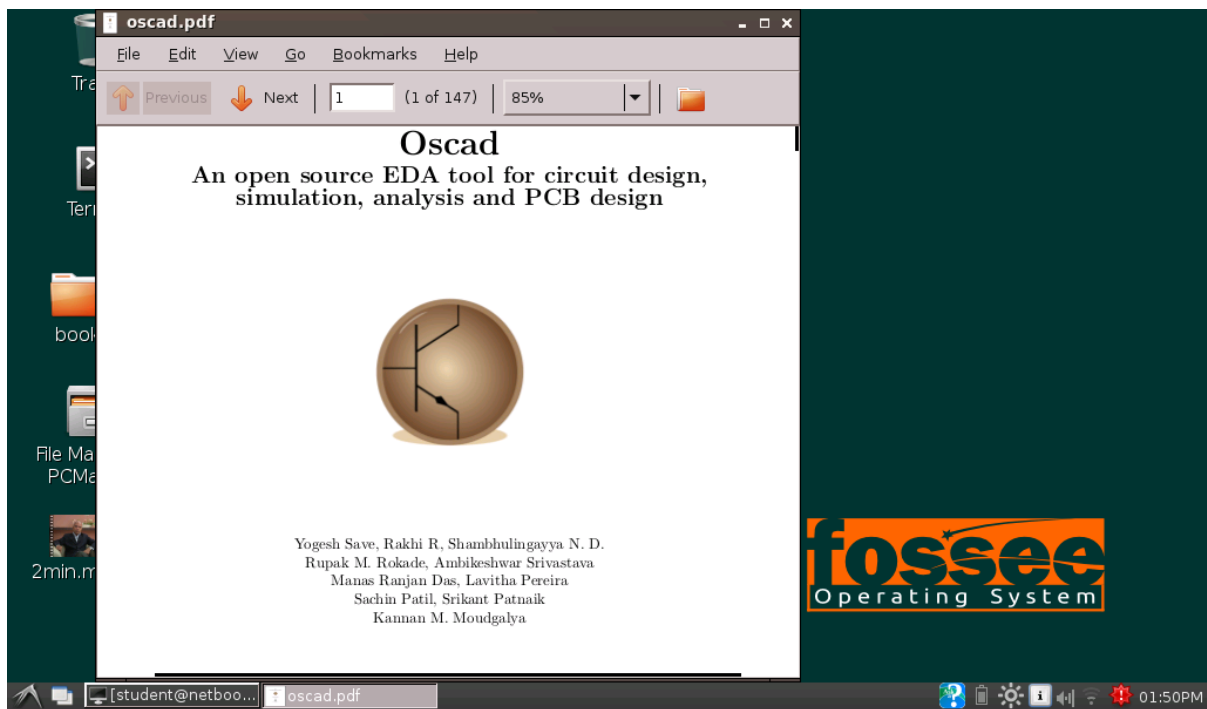Figure 2: The Laptop comes with 10" screen and a full keyboard

Figure 3: Oscad book, published by Shroff Publishers, compiled on the Laptop, using LaTeX
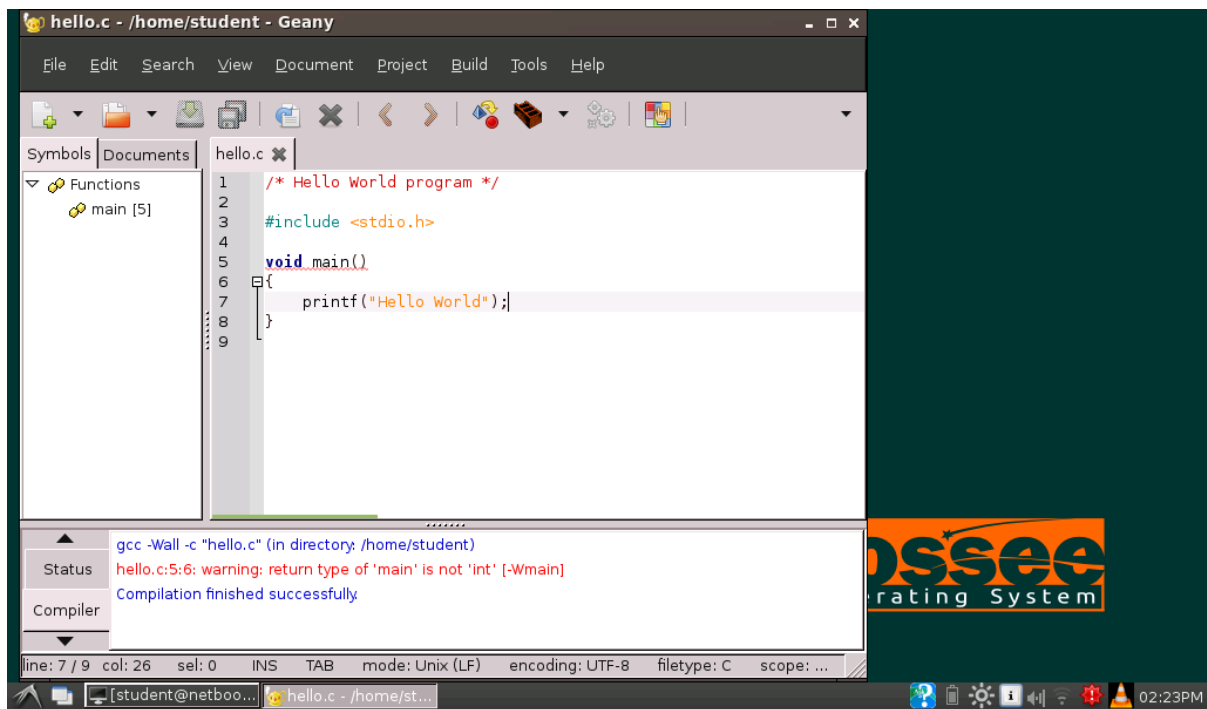

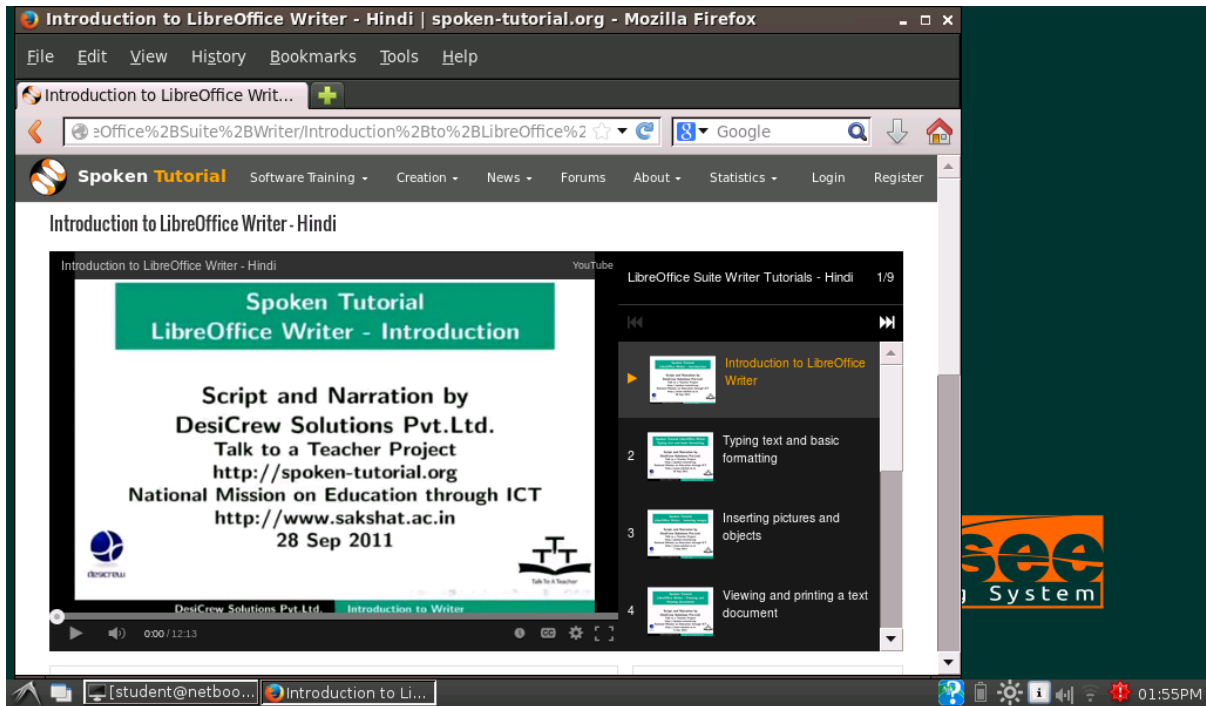Figure 4: Compilation of a C program in an Integrated Development Environment, genie

Figure 5: LibreOffice Hindi Spoken Tutorials playing through Firefox on the Laptop
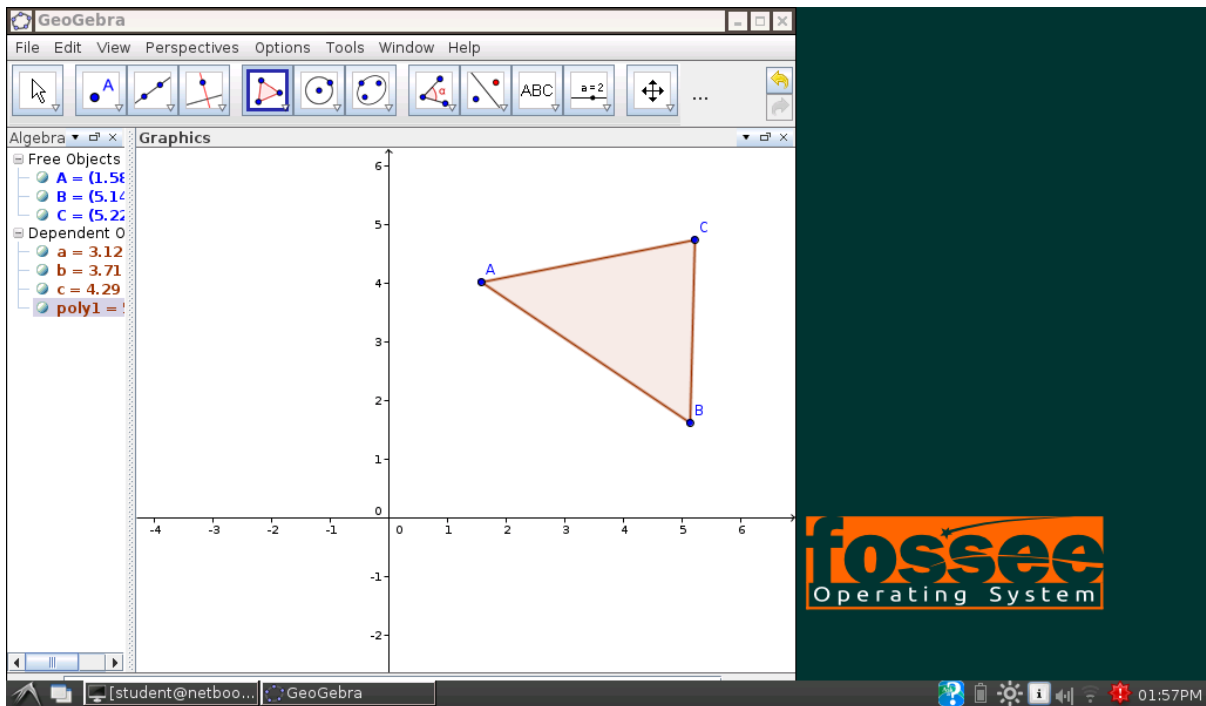
Figure 6: A view of GeoGebra, an algebra and geometry program, useful to school students, running on the Laptop
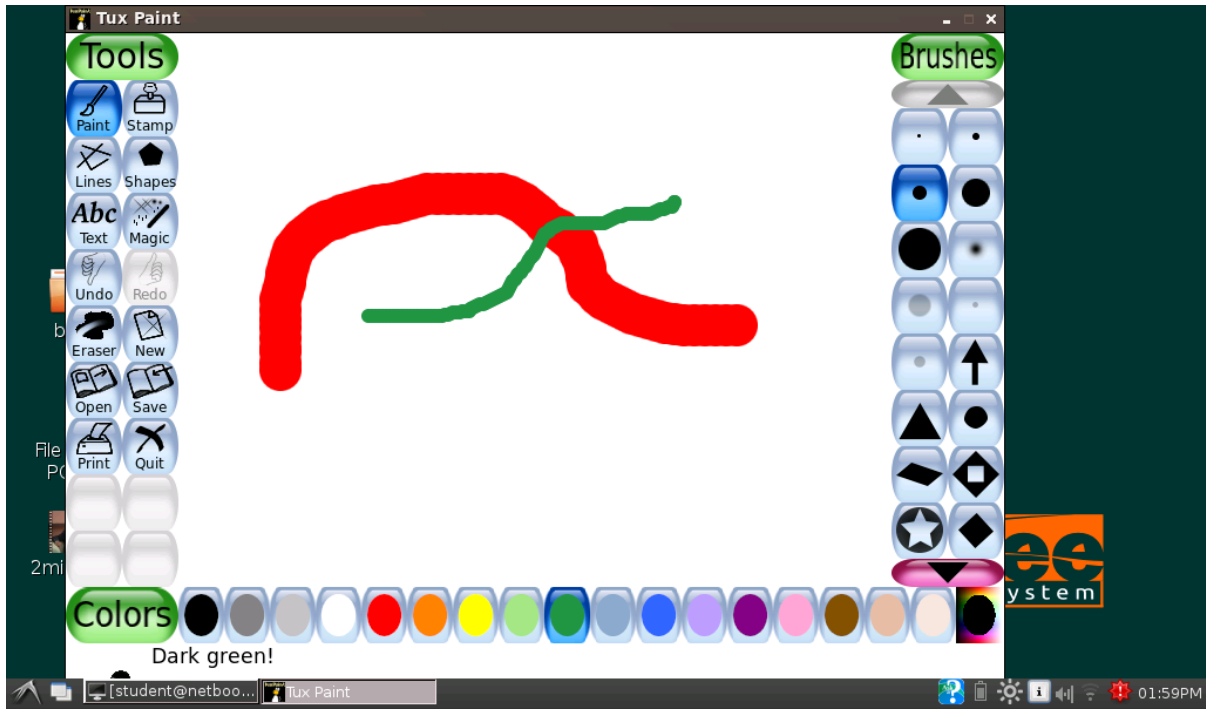
Figure 7: A view of TuxPaint, a free painting software, of interest to children

Figure 8: Video players also work well in the Laptop