A Multimedia Kiosk For Botanical Garden Using ULK

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Abstract— A digital screen is used to display the information about the different flora in a botanical garden. We implement this using the 'Embedded technology'. It is planned to set up separate displays for each flower. The kiosk gives a variety of information about the flora such as its scientific name, family to which it belongs and other details.

Keywords – Embedded technology, Unified Learning Kit

I. INTRODUCTION

The botanical gardens in India lack to provide information about the plant species they grow. Thus the tourists are unable to learn about the rich flora of our country. There comes a need for more add-on features in garden.
We intend to facilitate the visitors by setting up lcd displays in front of the flower showcase area. This will not only attract more tourists, also helps to enhance their knowledge. It also plays a role in the career of research scholars who are interested in the field of bio-sciences.

II.   SUMMARY OF EXISTING SYSTEM

At present, the parks don't have a tool to convey the features of the plant species. Therefore the tourists need to carry an encyclopedia along with them or seek internet access to have an immediate update of the flowers they see in the garden. This is main drawback in the current system. Hence this should be overcome in the proposed system.

III.   PROPOSED SYSTEM

In the proposed system we wish to incorporate the LCD displays by programming in the system and interfacing it with the Unified Learning Kit (ULK).

A. FLOW CHART
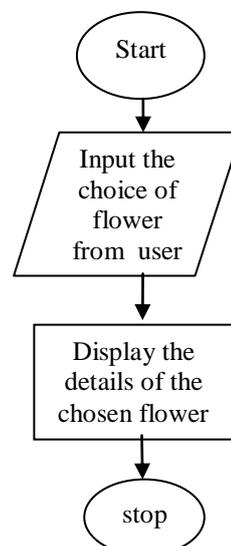
B. ALGORITHM

Step 1: Interface the ULK kit and syatem. Go to system settings->network-> options->IPv4-> settings->save.

Step 2: Click on 'eclipse' software.Then choose file->new->select c project-> project name->project type->make file project->select empty project->tool chains->select linux GCC->finish

Step 3:To execute the program copy the following files (1) make file (2) project.lds (3) macros.h (4)main.c in your project file. Then Go to eclipse-select your project from which click main.c. Then save all. Select your project name click clean project

Step 4:Go to ULK panel. Then click ULK count from where select list ULK.

Step 5: select no name file and click connect

Step 6: select ULK option. Click on load and browse.

Step 7: Go to desktop, click on workspace 1 and select your project.

Step 8: select the bin and browse

Step 9: Run the bin file.

Step 10: Finally the output is displayed in the ULK kit.

Step 4: Stop

C. SAMPLE CODE

```
int frose() /*fn definition to display details of rose*/
{
    int i,fd,dd;
    ulk_cpanel_printf("name of the flower\n");
/*displays rose in cclcd*/
    ulk_fpga_clcd_init();
    ulk_fpga_clcd_display_on();
    ulk_fpga_clcd_display_clear();
    ulk_fpga_clcd_cursor_home();
    ulk_fpga_clcd_display_string("rose");
    ulk_proc_delay(ULK_SEC(5));
/*displays sci name in cclcd*/
    ulk_cpanel_printf("scientific name\n");
    ulk_fpga_clcd_init();
    ulk_fpga_clcd_display_on();
    ulk_fpga_clcd_display_clear();
    ulk_fpga_clcd_cursor_home();
    ulk_fpga_clcd_display_string("rosa rubiginosa");
/* displays temperature in 7 segment display*/
    ulk_cpanel_printf("Temperature to be maintained in degree celsius\n");
    ulk_fpga_7seg_led_enable();
}
```

IV.   EXPERIMENTAL RESULT
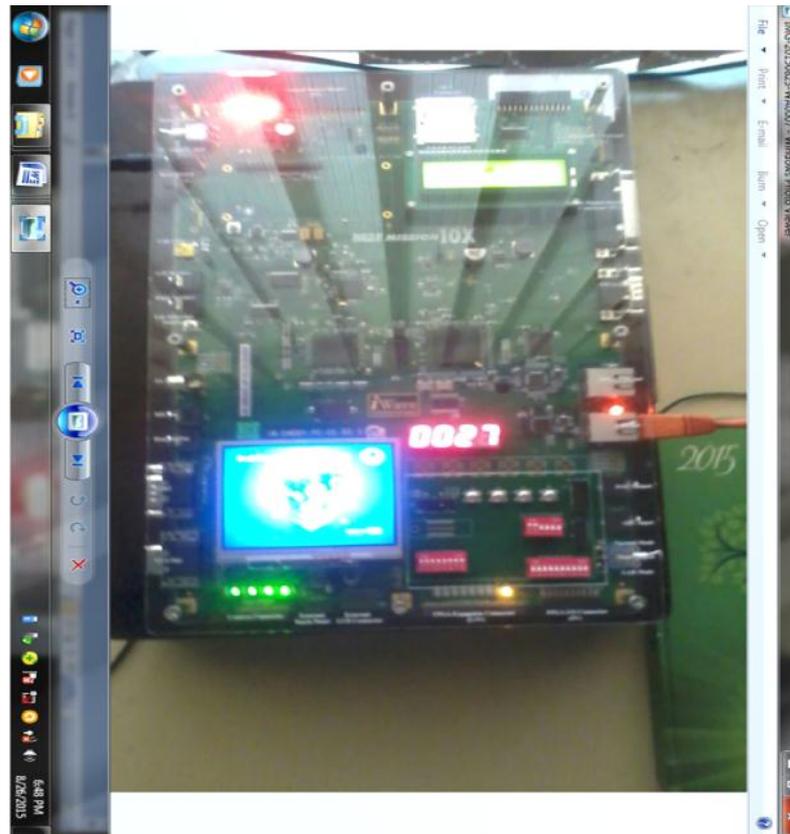
V.   CONCLUSION

Thus our project helps the tourists and research scholars to gain more knowledge about the various plant species in a botanical garden. The proposed system also attracts more tourists to our country, thereby making a development in the ministry of tourism department.

VI.   FUTURE WORKS

Our project can be implemented in various parks and botanical gardens situated in different parts of India. It can also be used for research work.

REFERENCES

[1] Basic ULK programs.

ABOUT THE AUTHOR

Ashok Murugesan received his M.Tech from JNTU, Anantapur. He completed his BE from Madurai Kamaraj University, Madurai. He is the academic consultant for Fabmax Semiconductors Research Labs Private Limited, Chennai. His area of research includes Grid Computing, Cloud Computing, and Computational Intelligence. He is the member of ISTE. He presented several papers in National and International Conferences. He published 35 papers in peer reviewed International Journals. He is serving as TPC member for international workshops & conferences.