



**NOKIA**

## Mobile Architecture and Programming by using J2ME (Asha OS), .Net (Windows Phone (7/8)), Nokia X (Android) & Python, Linux (Raspberry Pi)

(Organized by Department of CSE, Indira Gandhi Delhi Technical University for Women (Formerly IGIT), Kashmere Gate Delhi-110006) in collaboration with Nokia University Relations, Finland)

**FROM 16-06-2014 to 25-07-2014**



Group pic. Of STP 4 held on 21-06-13 to 31-07-2013

### ABOUT US

There has been tremendous growth in the field of mobile technologies due to the availability of various software tools and the cheap hardware that drives these systems. It has been observed that most of the users are now accessing the mobile devices than desktop systems for communication, game playing, sending mails, web browsing, social networking, m-commerce, entertainment, agriculture and computing to name a few. However, the usage of mobile devices in education, e-learning etc is not very common.

The training will empower and enable the students, programmers and researchers to use the mobile device as an instrument for diversified applications like Agriculture, E-learning, Health Care, Games, Defense and Navigation to name a few. Especially the students community gets the familiarity in programming the on-device peripherals and thereby to develop the various applications for mobile and hand held devices more efficiently. These mobile devices are become a vibrant and a very exciting platform for teaching, learning and application development for any individual student and develop end user project to meet the changelings of the present generation.

### OBJECTIVES

Mobile Architecture and Programming for various application domains:-

- Entertainment
- Travel/Tour
- Emergency Needs
- Information Retrieval
- Social Media
- Education
- Product Development

Programming of on-device peripherals e.g. Camera, Audio/Video, GPS, GSM, Bluetooth,

Accelerometer, Gyroscope, Microphone etc. based on

- Windows Phone
- Asha OS (S40 )
- Linux based Meego/ Maemo etc.
- Customizing the Mobile Operating Systems
- Interfacing the external embedded peripherals to the Mobile for Remote Control.
- Programming the Mobile device to experiment the concepts of various ICT subjects like-
- Mobile Database Management System
- Mobile Computing
- Data Structure using Mobile
- Mobile Architecture
- Publishing the research papers and apps in various journals, conferences and different market places and building the real time projects.
- Take-Home Project: Design and development of Re-programmable embedded computing system and interfacing with any mobile device.

### DEVICES:

- a) **Nokia Mobile devices (Lumia 800/820 and Asha 305/311 and Nokia X Android ) are used for practical purposes.**
- b) **Various SoC boards like Raspberry Pi, Intel Atom Board, MBED and Panda Board etc. for practical and on-device testing in real environment for Application development .**

### TRAINING MATERIAL:

Training material and the software's required for developing the mobile applications and embedded system will be provided.

### RESOURCE PERSONS:

Internal Staff from IGDTUW and external from Nokia, Microsoft and experts from industry such as TI, ARM, Intel etc. It is also supported by the ITRA

(Department of Electronics & Information Technology, MHRD).

**COURSE CONTENT:** Topic wise detailed schedule is attached.

**CERTIFICATE:** All successfully completed participants will get the certificate **jointly from Indira Gandhi Delhi Technical University for Women and Nokia University Relations.**

**REGISTRATION & SELECTION PROCESS:** Those candidates ( Male or female candidates from any university or college are also eligible) who are willing to attend the program needs to apply through Registration form by paying a DD of Rs. 6000/- on or before 06-06-2014. Only 60 seats are available. The selection will be based on first come first serve. 30 % of the seats are reserved for IGDTUW students. All selected participants will be informed on or before 09-06-2014 through E-mail.

**WHO CAN ATTEND THE PROGRAM:**

Students studying or completed B.Tech/ M.Tech (CSE, ECE, IT)/ MCA (preferably B.Tech students who have completed three semesters). Faculty members who are teaching (or planning to teach) Embedded Systems/ Mobile Computing/ Mobile Communication etc can be benefited by this training.

**CONTACT PERSON:**

For any enquires you can contact course coordinator in the following address:

**Dr. S. Ramanarayana Reddy**  
Head of Department, CSE  
Electrical Block, Room No.E-205, IGDTUW,  
Kashmere Gate, Delhi – 110 006  
Tele: +91 9810101742, 011-23869784,  
011-23900253  
**Email: rammallik@yahoo.com**

**Mr. Vineet Kr Sahu**  
Assistant Prof., CSE

**Email: [vineet.igdtuw@gmail.com](mailto:vineet.igdtuw@gmail.com) &09718115688**

**Please visit [www.mobileeducationkit.net](http://www.mobileeducationkit.net) or [www.igdtuw.ac.in](http://www.igdtuw.ac.in) for further updates and correspondence.**

**REGISTRATION FORM**

Paste your recent photograph with self attested

1. Name of the applicant: .....
2. Branch/ Semester/ College:.....
3. Name of the Dept/ Designation: .....
4. Mailing address: .....
5. Mobile No: .....
6. Email: .....
7. Details of DD: Amount: 6000/- (DD should be drawn in favour of “Registrar, IGDTUW”, payable at Delhi and mailed it to **Dr. S. Ramanarayana Reddy, HoD, CSE Department, Room No E-205, Electrical Block, IGDTUW, Kashmere Gate, Delhi – 110006** either by post or by person on or before 06-06-2014).
8. DD No.: \_\_\_\_\_ Drawn on : \_\_\_\_\_

9. Please write a statement of purpose about “why you would like to attend this course”:

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**Signature of the Applicant**

**Date:**  
**Place:**

5th Summer Training Program on  
**" Mobile Architecture and Programming by using J2ME (Asha OS), .Net (Windows Phone (7/8)), Nokia X (Android) & Python,  
Linux (Raspberry Pi)organised by Indira Gandhi Delhi Technical University for  
Women(Formerly IGIT) in collaboration with Nokia University Relation"**

From 16-06-2014 to 25-06-2014

**Training Schedule for month of June-July 2014**

Day & Date	Scheduled Time	Training Topic
16 June 2014	9:00 AM - 5:00 PM IST	Inauguration of 5th STP and Introduction to MAP
17 June 2014	9:00 AM - 5:00 PM IST	Introduction to On Chip component and their access: Software component of the mobile and its role.
18 June 2014	9:00 AM - 5:00 PM IST	Introduction to OMAP architecture/ Snapdragon: OMAP Application, Introduction to Raspberry Pi.
19 June 2014	9:00 AM - 5:00 PM IST	Windows Phone Architecture and Programming Mobile Architecture Vs Computer Architecture Tool Chain for Windows Phone Development
20 June 2014	9:00 AM - 5:00 PM IST	Installation of OS, formatting of Mobile, Language files, Flashing etc Demo with Nokia Phone
23 June 2014	9:00 AM - 5:00 PM IST	Windows Phonce 7/8 New Features added to Windows Phone 8 Demo of various application on Windows Phone
24 June 2014	9:00 AM - 5:00 PM IST	Windows Phone UI controls and Data Binding -I Windows Phone UI controls and Data Binding –II
25 June 2014	9:00 AM - 5:00 PM IST	WP programming for Multimedia(Audio, Video, Images) WP programming for Camera Access
26 June 2014	9:00 AM - 5:00 PM IST	Mobile Database -I Mobile Database –II, Telephone Module (SMS, Calling, Email), Memory Management in WP ( Isolated Storage)
27 June 2014	9:00 AM - 5:00 PM IST	WP programming for in-built Sensor -I WP programming for in-built Sensor -II
30 July 2014	9:00 AM - 5:00 PM IST	Introduction to Android and App Development
01 July 2014	9:00 AM - 5:00 PM IST	Accessing the ON Device peripherals such as Camera, Audio, Images, Sensors etc
02 July 2014	9:00 AM - 5:00 PM IST	UI controls and Data Binding -I and Data Binding –II
03 July 2014	9:00 AM - 5:00 PM IST	Communication Services (REST services, SOAP via services, TCP, WCF and many more)
04 July 2014	9:00 AM - 5:00 PM IST	File Streaming and File Handling with real life examples
07 July 2014	9:00 AM - 5:00 PM IST	Introduction to Nokia OS S40 Asha series. Nokia SDK 2.0 Installation and Demo
08 July 2014	9:00 AM - 5:00 PM IST	Enhanced APIs for Touch (S40)/ LWUIT for richer UIs (S40) Integrated Maps API for Java ME (S40).
09 July 2014	9:00 AM - 5:00 PM IST	Enhanced Location Feature/Sensor Emulation (S40)/ Multiple Touch Simulation for (S40) Programming through J2ME
10 July 2014	9:00 AM - 5:00 PM IST	Mobile Security Issues, challenges & future
11 July 2014	9:00 AM - 5:00 PM IST	Cloud Computing, platforms, issues and future
14 July 2014	9:00 AM - 5:00 PM IST	Designing you “My Mobile Device”
15 July 2014		Customizing the Mobile Operating System: Linux and Android for “MyDevice”
16 July 2014		Application Development on “ MyDevice” and Interfacing.
17 July 2014		Starts Mini project including Abstract, SRS and Technical Paper writing project implementation and document generation.
18 July 2014		
21 July 2014		
22 July 2014		
23 July 2014		
24 July 2014		Project Presentation
25 July 2014		Future Directions and R&D Further project Assignment ( To continue with practice and for their final year project ) Feed Back and Discussion Valedictory ( Award and Certificate Distribution, formation of “Indian Mobile Architecture and Programming Chapter”)