

# **5<sup>th</sup> Summer Training Program**

**On**

**5<sup>th</sup> Summer Training Program on “Mobile Architecture and Programming by using J2ME (Asha OS), Nokia X (Android), Python & Linux (Raspberry Pi)” Organized by CSE Dept, IGDTUW, Delhi in collaboration with Nokia University Relations  
(From 16-06-2014 to 25-07-2014)**

**Organized by**



**IGDTUW, Delhi**

**In Collaboration With**

**NOKIA**

**(From 16-06-2014 to 25-07-2014)**

**At IGDTUW, Delhi**

**Co-ordinator:**

**Dr. S. Ramanarayana Reddy,  
Associate Professor, CSE Department,  
IGDTUW, Kashmere Gate,  
Delhi-110006.**

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## 1. **INDIRA GANDHI DELHI TECHNICAL UNIVERSITY FOR WOMEN**

Indira Gandhi Delhi Technical University for Women (IGDTUW) has been upgraded from Indira Gandhi Institute of Technology in May 2013 vide Delhi State Legislature Act 9, 2012, as a non-affiliating teaching and research University at Delhi to facilitate and promote studies, research, technology, innovation, incubation and extension work in emerging areas of professional education among women, with focus on engineering, technology, applied sciences, management and its allied areas with the objective to achieve excellence in these and related fields.

Erstwhile Indira Gandhi Institute of Technology (IGIT) was established in 1998 by Directorate of Training and Technical Education, Govt of N.C.T of Delhi as the first engineering college for women only. From 2002- 2013, the college remained the first and only constituent college of Guru Gobind Singh Indraprastha University.

The up gradation of IGIT, already a prestigious college of north India, to University will further enable it to function even more efficiently as a teaching and research centre in various branches of engineering, promoting advancement and dissemination of knowledge and learning among women of the country and to meet the requirement of technically skilled women workforce. The objective of the University is to foster industry relevant research and innovations and empower the women of our country through value based higher education making them employable, self reliant, responsible citizen of the country with concern for environment and society. Operating from the prestigious old campus of Delhi College of Engineering at Kashmere Gate, Delhi. IGDTUW offers the following programs:-

<b>S. No.</b>	<b>Title of Programs</b>	<b>Level</b>	<b>Duration (Years)</b>	<b>Sanctioned annual intake</b>
1	B.Tech. (Computer Science & Engineering.)	UG	4	60
2	B.Tech. (Electronics & Communication Engineering)	UG	4	60
3	B.Tech (Mechanical & Automation Engineering)	UG	4	60
4	B.Tech (Information Technology)	UG	4	60
5	M.Tech (Information Security Management)	PG	2	30
6	M.Tech (Mobile & Pervasive Computing)	PG	2	30

7	M.Tech (Robotics and Automation)	PG	2	30
8	M.Tech (VLSI Design)	PG	2	30
9	MCA	PG	3	60
10	M.Tech (ECE) Weekend Program	PG	3	60
11	Ph.D IGDTUW	Doctorate	3 to 5 years	As per the University Norms

The students of B.Tech & MCA Program at IGDTUW are selected through a Common Entrance Examination conducted by GGS Indraprastha University at all India level. These students not only go through the rigors of academics during the four years engineering programme but are also equipped with good managerial and communications skills acquired through seminars, guest lectures, etc. There has been a dynamic progress at Indira Gandhi Delhi Technical University for women in academic and technical activities along with improvement in facilities and infrastructure to keep it at par with the premier institutes of the country. Many state of art labs have been established added in various branches of engineering.

## **Prof. Nupur Prakash, Vice Chancellor, IGDTUW**

*Dr (Mrs.) Nupur Prakash, possesses a work experience of around 30 years in research, teaching and academic administration, with several years spent holding key leadership positions at various academic institutes of repute.*

*She has been educated at IIT Roorkee and possesses a brilliant track record as an academician and administrator in the field of Engineering and Technology. She has been the nominated for Bharat Jyoti award for being a Women Achiever of 2011 and was honoured with the Best Academic Administrator Award by Association of Scientists, Developers and Faculties (ASDF), Govt. of Pondicherry in 2012.*

*A recipient of the Chancellor's Medal for being the best outgoing student of University of Roorkee in 1981, Dr. Nupur Prakash completed her B.E. (Electronics & Communication Engineering) and M.E. (Computer Science & Technology) degree from University of Roorkee (now I.I.T. Roorkee) and PhD (Computer Engineering) from Punjab University, Chandigarh in the area of Natural language Processing using Artificial Neural Network. A keen researcher with quest for knowledge, she has worked as a Scientist at CSIO, Chandigarh (a CSIR lab) from 1983 to 1985 and was involved in design, research and development of microprocessor based instruments.*

*A state rank holder of Uttar Pradesh in Intermediate Exam, securing first rank among UP girls in 1977, she has been the University Topper for two consecutive years in 1978 and 1979 across all branches at **University of Roorkee (now I.I.T.,Roorkee)**. During her student life, she has not only excelled in academics, but has also been the best athlete and best swimmer of Roorkee University and has bagged several prizes in Badminton, Table tennis, rowing and billiards tournaments.*

*She was actively involved in establishing the dept. of Computer Engg. at the prestigious S.G.S. Institute of Technology and Science, Indore, M.P. with technical support from I.I.T. Mumbai during 1986 to 1989. Later on, she served the dept. of Computer Sc. and Engg. at Punjab Engineering College (P.E.C.) now PEC University of Technology, Chandigarh for ten years (1991-2000) in different capacities and became the youngest and the first woman Head of the Dept. in 1994.*

*Dr. Nupur Prakash has excelled in academics along with successful execution of administrative responsibilities and has several international assignments to her credit. She has been an International Consultant to Educational Consultants of India (EdCil) in the area of “Network management”, for an Asian Development bank funded Project on ‘ICT in Basic Education’ awarded by Ministry of Education, Govt. of Uzbekistan and trained the trainers at Tashkent in 2009. She was awarded with UNESCO fellowship in 2007 to attend G8 UNESCO forum on “Education, Research and Innovation: New Partnership for Sustainable Development” in Trieste, Italy. She has traveled to Australia, Malaysia, Dubai, USA, Tokyo, Italy, New Zealand, Hongkong and Beijing to attend short-term courses, seminars, workshops and conferences. She has conducted half day tutorials, delivered keynote address and presented papers at several National and International Conferences. She has delivered invited talks at National University of Singapore and University of Mauritius and has been nominated as a member, Board of Studies and Board of Examiners twice at University of Mauritius (2005-2007 and 2010-2012).*

*While serving her term as Dean, University School of ICT, GGS Indraprastha University during 2006-2008, she organised six weeks training programs on ‘Cyber Crime Investigations and Computer Forensics’ to train 100 officials of Delhi Police and collaborated with National Informatics Centre (NIC) to offer a customized MCA program on Information Security to 30 foreign students of LAO PDR, under Bilateral cooperation between Govt. of India and Republic of Lao PDR funded by Ministry of External Affairs (MEA). She has also held the post of Dean, School of Engineering and Technology (2009-12) and strengthened the PhD program of GGS Indraprastha University and its affiliated Engineering colleges.*

*She has served Indira Gandhi institute of Technology (IGIT) as Principal for two terms. During her first term (2002-2006), she spearheaded the growth and development of IGIT. The college acquired a new identity, visibility and became a brand name and went on to become the most sought after institute among all the engineering colleges affiliated to GGS Indraprastha University, Delhi. During her second term (2009-2013) IGIT, was ranked among top five institutes of Delhi offering education in the field of Engineering and Technology. Under her dynamic leadership, the college forged academic alliances with many leading industries for conduct of training programs, joint research, lab establishment and collaborative work, leading towards 100 % placements of students in prestigious Indian companies and MNCs. At IGIT, she fostered an environment of creativity among women engineers and encouraged them to win several car design contests, scholarships and awards at National and International level.*

*She is a member of Governing Council and Advisory Board of several Engineering Colleges and Management Institutes of India. She is on the editorial board of several IT Magazines and Journals. She has been a reviewer for several conference and Journal papers on Mobile Networks, Ubiquitous Computing, E-learning and Secure Wireless Networks at National and International level.*

*She has been a nominated by AICTE, NBA, UGC, DIT (Ministry of Comm & IT, Govt. of India), NIC, DOEACC (NIELIT), CDAC and DIT (Govt of Delhi) as expert member of various committees. Her major areas of interest are Mobile Communication, Network Security, Cryptography, Secure Wireless Communication and Natural language Processing. She has guided 8 PhD scholars and authored more than 100 research papers and articles for various national and international journals/conferences of repute. She is a life member of professional bodies like Computer Society of India (CSI) and Associate member of Institute of Electronics and Electrical Engineers (IEEE), USA.*

## Theme of Training

### **5<sup>th</sup> Summer Training Program on “Mobile Architecture and Programming by using J2ME (Asha OS), Nokia X (Android), Python & Linux (Rasp berry Pi)”**

**Organized by CSE Dept, IGDTUW, Delhi**

**in collaboration with Nokia University Relations**

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

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) 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 (IGDTUW) and external from Nokia, Microsoft and experts from industry such as TI, ARM, Intel etc

#### **CERTIFICATE:**

All successfully completed participants will get the certificate **jointly from IGDTUW,**

#### **Nokia.REGISTRATION & SELECTION PROCESS:**

**Whose candidates ( Male or female from nay 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 ó 110 006  
Tele: +91 9810101742, 011-23869784,  
011-23900253

**Email: [rammallik@yahoo.com](mailto: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.**

**5<sup>th</sup> Summer Training Program on “Mobile Architecture and Programming by using J2ME (Asha OS), Nokia X (Android), Python & Linux (Raspberry Pi)” Organized by CSE Dept, IGDTUW, Delhi in collaboration with Nokia University Relations (From 16-06-2014 to 25-07-2014)**

**Please paste a recent Photograph with the signature on the photograph  
Registration Form**

<p><b>5<sup>th</sup> SUMMER TRAINING PROGRAM</b></p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p align="center"><b>Mobile Architecture and Programming by using J2ME (Asha OS), .Net (Windows Phone (7/8)), Nokia X (Android) &amp; Python, Linux (Raspberry Pi)</b></p> <p align="center">(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)</p> <p align="center"><b>FROM 16-06-2014 to 25-07-2014</b></p>  <p align="center"><small>Group ph. Of STP4 held on 21-06-13 to 31-07-2013</small></p>	<p align="center"><b>REGISTRATION FORM</b></p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80%;"> <p align="center">Paste your recent photograph and self attest the same</p> </div> <ol style="list-style-type: none"> <li>1. Name of the applicant: .....</li> <li>2. Branch/ Semester/ College: .....</li> <li>3. Name of the Dept/ Designation: .....</li> <li>4. Mailing address: .....</li> <li>5. Mobile No: .....</li> <li>6. Email: .....</li> <li>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).</li> </ol>	<ol style="list-style-type: none"> <li>8. DD No.: _____ Drawn on: _____ for an amount of Rs. 6000/- From the bank: .....</li> </ol> <p>[Please write your name and contact number in the back side of the DD]</p> <ol style="list-style-type: none"> <li>9. Please write a statement of purpose about “why you would like to attend this course”: ..... ..... ..... ..... ..... ..... ..... ..... ..... .....</li> </ol> <p align="right"><b>Signature of the Applicant</b></p> <p align="right">Date: _____</p> <p align="right">Place: _____</p>
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## **Training Methodology**

This training has been planned as a blend of Theory & Practicalø, Assignments, Demos, Research, Tests (quiz) and Minor Project. Theory classes have been handled by experts from external, internal and industry professionals. Most of these sessions are combined with Lab sessions which are conducted with the help of devices that are sponsored by Nokia to clarify the concepts. Assignments are given to practice the concepts. These have been monitored and evaluated to select the best student ward.

Every group (2 to 4) has been assigned (selected by the students) a project work in the end of the first week and it has been monitored regularly for each group. Every group has been given the suggestions for SRS, Design, Implementation, Testing and report writing for their project. Each project has been tested in simulator environment and actual devices. The list of topics and projects are placed separately.

### **CORE TEAM:**

- Dr. SRN Reddy (Coordinator for the workshop, engaged theory classes, Lab, and Project work, responsible for proposal of the workshop and getting the sponsorship from Nokia and Microsoft, conducting most of the theory, project and Lab session etc.)
- Mr.Vineet Kumar Sahu (Asstt. Coordinator for the workshop, engaged theory classes, Lab, and Project work, responsible for proposal of the workshop, conducting most of the theory, project and Lab session etc)
- Ms Nidhi Agarwal (Theory sessions and other activities)
- Mr Sanjay Kumar (Theory sessions and other activities)
- Mr. Pradeep Kumar (Theory sessions and other activities)
- Mr. Narendra Mishra (Theory sessions and other activities)
- Mr.Kishor (Theory sessions and other activities)

### **FROM NOKIA:**

Mr. Suresh Chande, Technical Product Owner Mobile Office, Finland.(Collaborating with coordinator for deciding the topics, sponsoring the devices and some speakers, reviewing the students projects and supporting the each activity by giving timely suggestions)

**Details of the Resource Persons for 5<sup>th</sup> Summer Training Program on “Mobile Architecture and Programming by using J2ME (Asha OS), Nokia X (Android), Python & Linux (Raspberry Pi)” Organized by CSE Dept, IGDTUW, Delhi in collaboration with Nokia University Relations**

(From 16-06-2014 to 25-07-2014)

The details of the list of resource persons from external and internal who have engaged the regular training, special lectures, demos, projects and lab classes in the 4<sup>th</sup> summer training program on “Mobile Architecture and Programming by using Windows Phone 7/8, J2ME (Series 40)” Organized by IGDTUW, Delhi in collaboration with Nokia (From 21-06-2013 to 31-07-2013) is follows:

No	Name of the Resource Person
1.	<b>Prof. Nupur Prakash, VC, IGDTUW</b>
2.	<b>Prof. HM Gupta, IITD, Delhi</b>
3.	<b>Prof M.Balakrishnan IIT Delhi</b>
4.	<b>Dr. Amarjeet Singh, IITD</b>
5.	<b>Mr. Gangadharappa, Asst. Prof, AIT, Delhi.</b>
6.	<b>Prof. PVM Rao, IIT Delhi</b>
7.	<b>Dr. Devopam Acharya SNU, UP</b>
8.	<b>Mr. Vineet Kumar Sahu, Asst. Prof, IGDTUW, Delhi</b>
9.	<b>Mr. Kishor Kumar, Asstt. Prof, MTIM, Delhi</b>
10.	Ms. Nidhi Agarwal, TA, ITRA Project
11.	Mr. Sanjay Kumar, TA, Mek 2, Nokia
12.	Mr. Pradeep Kumar, PA, ITRA
13.	Mr. Narendra Mishra, PA, Mek 2, Nokia

**Dr.SRN Reddy,  
Course Coordinator**

**Vineet Kumar**

**Asstt. Course**

**Sahu**

**Coordinator**

## 2. Profile of the Resource Persons List of Experts and their profile

### Dr. (Mrs.) NupurPrakash

Dr. (Mrs.) NupurPrakash is presently working as Vice Chancellor in Indira Gandhi Delhi Technical University (IGDTUW). Indira Gandhi Delhi Technical University for Women (IGDTUW) has been upgraded from Indira Gandhi Institute of Technology in May 2013 vide Delhi State Legislature Act 9, 2012, as a non-affiliating teaching and research University at Delhi to facilitate and promote studies, research, technology, innovation, incubation and extension work in emerging areas of professional education among women, with focus on engineering, technology, applied sciences, management and its allied areas with the objective to achieve excellence in these and related fields.

She received her B.E. (Electronics & Communication Engineering) and M.E. (Computer Science & Technology) degree from University of Roorkee (now I.I.T. Roorkee) in 1981 and 1986 respectively. She was awarded with the Chancellor's Medal for being the best outgoing student of 1981. She has worked as a scientist B at CSIO, Chandigarh (1983-85) on microprocessor based projects. She completed her PhD (Computer Engineering & Technology) from Punjab University, Chandigarh in 1998 in the area of Natural language Processing using Artificial Neural Networks.

She has served the Department of Computer Science & Engineering at Punjab Engineering College, Chandigarh as Head and Assistant Professor (1991-2000).

She is on the editorial board of several IT Magazines and Journals of National repute. She has been a reviewer for several conferences on **Mobile Networks, Ubiquitous Computing, Pervasive Computing and Secure Wireless Networks** organized at National and International level.

She possesses a work experience of around 29 years in research and academic administration. Her major areas of interest are **Mobile Communication, Network Security, Cryptography, Secure Wireless Communication** and **Natural language Processing**. She has authored around 100 research papers and articles for various national and international journals/conferences. She is a life member of professional bodies like Computer Society of India (CSI) and Associate member of Institute of Electronics and Electrical Engineers (IEEE), USA.

### **Dr. Devendra Kumar Tayal**

Dr. Tayal is working as Head of Dept in IGDTUW and has more than 10 years experience. He has completed his Ph.D from JNU. His area of interests are Database Management Systems, Fuzzy Logic & Intelligent Systems, Software Engineering, Data Mining, He has authored various research papers for various national and international journals/conferences.

### **Dr. S. Ramanarayana Reddy**

*S. Ramanarayana Reddy is working with IGDTUW, CSE Dept, Delhi since 2002. He has awarded PhD in Embedded systems Design in 2009 and received M. Tech degree, from Jawaharlal Nehru University, New Delhi in 2002. His research interest includes embedded systems, Mobile Architecture and Programming, system programming, and real-time systems and publishes more then 20 research papers that include international journals, conferences. He is teaching the embedded systems course for M.tech and B.Tech students since 2002. He has conducted several training programs on Mobile Architecture and programming and embedded systems for faculty and students. He has 14 years experience that includes industry and teaching. He is a member of CSI, VLSI Society of India and AMIE.*

### **Dr. H.M Gupta**

#### **Professor, Deptt. of Electrical Engg., IIT Delhi, India**

Prof. H.M Gupta received B.E. (Electronics and Communications) from University of Roorkee (now IIT, Roorkee) , M. Tech. (UHF and Microwave Engineering) from Indian Institute of Technology, Kharagpur and Ph.D. (Electrical Engineering) from Indian Institute of Technology, Kanpur.

He joined the faculty of Electrical Engineering at Indian Institute of Technology, Delhi in 1973, where he is a professor since 1986. Prof. Gupta held positions of Head of the Department, Dean (Undergraduate Studies), and Coordinator, Bharti School of Telecommunication Technology and Management at IIT, Delhi.

He held faculty positions at Mc Gill University, Montreal, Canada, and at Drexel University, Philadelphia, USA.

He has been an academic visitor to University of Maryland, College Park, USA; Media Lab at Massachusetts Institute of Technology, Cambridge, USA; Swiss Federal Institute of Technology, Lausanne, Switzerland and several British Universities. He has been Vice-President of System Society

of India, and is a founding member of Association for Security of Information Systems (ASIS). He is also President of "Institution of Communication Engineers and Information Technologists (ICEIT)".

**Dr. Amarjeet Singh, IITD**

Dr. Amarjeet Singh is working as Assistant Professor in Mobile and Ubiquitous Computing Group, CSE, IIT Delhi. Amarjeet Singh completed his undergraduate education in Electrical Engineering from Indian Institute of Technology, Delhi in 2002. He was awarded Rajendra Kumari Malhotra Award for Responsible Student Leadership in 2001. From 2002 to 2004, he worked as Senior Research and Development Engineer at Tejas Networks, Bangalore, India. In 2005, he joined Center for Embedded Networked Sensing (CENS), UCLA and completed his MS in Electrical Engineering in 2007. He was awarded the Edward K. Rice outstanding MS student award in 2007. In 2008-09, he was a recipient of Dissertation year fellowship, awarded to less than 1% of graduate students at UCLA. He completed his Phd in Electrical Engineering from UCLA in 2009. Part of the thesis work was completed during the research collaborations at Carnegie Mellon University and Sydney University. He was also awarded with a certification of "Leaders in Sustainability" for multidisciplinary work amongst top caliber UCLA students interested in sustainability.

**Mr. M. Gangadharappa**

Mr. M. Gangadharappa working as a assistant professor in Electronics and communication engg dept of IGDTUW and has more than 9 year teaching and 11years experience with doordarshan. He has done his M.Tech from IIT Kanpur and pursuing PhD from DTU, Delhi. His areas of interest are Mobile Communications/ Computing, Signal Processing, Optical Fiber Communication Systems.

**Mr. Kishor K.**

Kishor K. is working as Head of Dept in Mother Teresa Institute of Management, Delhi and has more than 10 years experience in academics. He has done MCA and now pursuing Ph.D in Network Intrusion Detection Systems. His area of Interest is Network Security and Operating System. He has presented a paper on "Use of Mobile Application in Rural Development" and attended several workshops and FDP as an attendee and some as a resource person.

**Mr. Vineet Kumar Sahu**

Vineet Kumar Sahu is working as a Assistant Professor, CSE, Dept, IGDTUW, Delhi. He had also worked as Research Associate on the Nokia Sponsored Project "WebMAP" at IGDTUW, Delhi. This project is being carried in collaboration with IIT Delhi, IIIT Delhi and IGDTUW. Previously he has

worked as an Application Developer at Airchord Televenture Ltd, Bangalore. He obtained his B.Tech in Computer Science and Engineering from Noida Institute of Engineering and Technology, Greater Noida in 2009 and M.Tech in IT from School of IT, CDAC NOIDA in 2011. He has published a research paper on "Integration of Piconet and Cellular Networks for Location Based Services" and a PASSPORT APP in Windows Market Place. His areas of interest are Mobile Computing, Bluetooth Technology, Location Based Services and Mobile Education. He has given/attended many seminars in faculty development programs, workshops and training programs.



### 3. Abstracts of Each Training Session

**Date: 01.07.2014**

**Topic: Bluetooth & Wireless Technologies**

**By: Prof. Nupur Prakash, VC, IGDTUW, Delhi**

**Date: 04.07.2014**

**Topic: J2ME Network Programming.**

**By: Dr. Debopam Acharya, SNU**

The session was dedicated to explain the objective and schedule of the training, and Procedure.

**Date: 04.07.2014**

**Topic: Introduction to GSM**

**By: Mr. M Gangadharappa**

Mobile architecture makes a mobile to work as a real-time system. The Objective of the session was to make students understand the Architecture of Mobiles, relation between various modules or components of the software.

**Date: 09.07.2014**

**Topic : Demonstration of Android Toolkit & GSM Module Kit**

**By: Scitech Technologies**

The session is about to discuss different tools provided for Windows Phone Development like Microsoft Blend, Visual Studio 2010 Express for Windows Phone.

**Date: 10.07.2014**

**Topic: Design & Innovation**

**By: Dr. PVM Rao, IIT Delhi**

This lecture is dedicated to complete SoC and Peripherals, Comparisons between various components of a mobile manufactured by different companies. Detail discussion was held about Qualcomm, Cortex of TI and ARM. The Objective of the session was to make understand the students about components and how it is different from computer architecture w.r.t Memory, Processor, Peripherals, and I/O etc.

**Date: 21.07.2014**

**Topic: Recent Trends of Mobile Computing & Architecture**

**By: Dr. H M Gupta, IIT Delhi**

The session was dedicated to the RTOS and their role in the mobile application development. RTOS, type of RTOS and their characteristics were explained. Different RTOS like Symbian, Maemo, Meego, and Window Phone were discussed along with the characteristics of RTOS and the differences between OS, RTOS, Mobile RTOS

**Date: 23.07.2014**

**Topic: Review of the Projects**

**By: Dr. Amarjeet Singh, IIT Delhi**

The objective of this session was to explain the creation of User Interface of the Silverlight and how it is similar to HTML and XML.

**Date: 24.07.2014**

**Topic: Project Evaluation**

**By: Dr. HM Gupta, IIT Delhi**

The session was dedicated to the UI Controls using Silverlight including Button Control, Textbox Control etc.

**Date: 25.07.2014**

**Topic: Valedictory of STP5**

**By: Dr. M Balakrishan, IIT Delhi**

The Session was dedicated to motivate the student about Mobile Technology and its tremendously increasing use in today's world.

**Date: 27.06.2013**

**Topic: Introduction to Project Development**

**By: Dr. SRN Reddy**

This section was dedicated to the project description and the procedure to submit the project Report through the website <http://www.mobileeducationkit.net>.

This website is designed under a project called Mek, which is running under the collaboration of Nokia University Relations, IIT Delhi & IGDTUW.

**Date: 28.06.2013**

**Topic: Testing of Application on Nokia Lumia 800 Device**

**By: Dr. SRN Reddy**

This session was dedicated to advance testing of the experiments explained in the session and taught through the website on real time Devices.

**Date: 28.06.2013**

**Topic: Lecture on Windows Phone 7 Libraries Dr.S.R.N. Reddy**

**By: Dr. SRN Reddy**

This session was dedicated to give lecture on explain the WP7 Libraries.

**Date: 28.06.2013**

**Topic: Lecture on Camera Task by M.R.P Reddy**

The lecture was dedicated to accessing Mobile Camera, Capturing the pic and display it.

**Date: 28.06.2013**

**Topic: Lecture on Camera Operation.**

**By: Dr. SRN Reddy**

This session was dedicated to explain the working of camera operations in Windows Phone.

**Date: 28.06.2013**

**Topic: Quiz & Feedback**

**By: Dr. SRN Reddy**

Weekly quiz and feedback submission was held during this session. So the student's opinion and suggestions was taken in rank form. Also, the next session and expert lecture is decided on the bases of the student's remark.

**Date: 1.07.2013**

**Topic: Lecture on Audio Player**

**By: Dr. SRN Reddy**

This session was dedicated to the working of audio player and the libraries related to Audio Player.

**Date: 2.07.2013**

**Topic: Lecture on Video Player**

**By: DR. SRN Reddy**

The lecture aimed at explaining how to create Video Player using Windows Phone Platform.

**Date: 3.07.2013**

**Topic: Lecture on Isolated Storage**

**By: Dr.SRN Reddy**

This session was dedicated to learn File handling and data handling. File creation, writing data onto files, reading data from files were explained with some examples.

**Date : 04.07.2013**

**Topic: Lecture on Debugging**

**By: M.R.P Reddy**

Lecture is dedicated to learn different techniques to debug a project through break points, step by step run and other methods.

**Date : 04.07.2013**

**Topic: Introduction to choosers and launcher**

**By: Dr.SRN Reddy**

This lecture is dedicated to different choosers and launchers available in Windows Phone SDK.

**Date: 05.07.2012**

**Topic: Lec. on Bluetooth Technology**

**By: Dr. (Mrs.) Nupur Prakash**

This session was dedicated to discuss Bluetooth Technology in details.

**Date : 05.07.2013**

**Topic : Introduction & Demo on Metro Style**

**By: Mr. Vineet Kumar Sahu**

This session was to discuss about the Introduction & Demo on Metro Style in Windows Phone Application.

**Date : 05.07.2013**

**Topic : Lecture on Layout**

**By: Mr. Vineet Kumar Sahu**

This session was to discuss about the Introduction and the APIs invoke distinct built-in applications that replace the currently running applications.

**Date : 04.07.2013**

**Topic : Database connectivity**

**By: Mr. Kishor Kumar**

This session was to discuss about the connectivity between SQLite Database. Three Demo programs to Create, Insert and search the data in a database were demonstrated.

**Date : 05.07.2013**

**Topic: Lecture Windows Phone Life Cycle and blend**

**By: Dr.SRN Reddy**

This lecture was dedicated to Microsoft Blend and Phone Life Cycle.

**Date: 12.07.2013**

**Topic: Registration and Unlocking the WP**

**By : Reddi Prasad Reddy**

This session was to make student learn how to register and unlocked a Window Phone. A sample demonstration of the same through device has been conducted for the needs of several students.

**Date: 05.07.2013**

**Topic: Lec. Windows Phone 7 Class Libraries**

**By: Dr. SRN Reddy**

This session was dedicated to learn how program and use of class libraries in Window Phone by writing application.

**Date: 11.07.2013**

**Human Sense**

**By: Dr. Amarjeet Singh, IITD**

Human Sense project and role of low-cost mobile devices for various applications has been decorated especially mobile as a sensing element used in some of the real projects at IITD along with scope of researcher in this domain at IITD.

**Date: 11.07.2013**

**Topic: J2ME for S40 device programming**

**By: Rakesh, NOKIA**

J2ME environment were discussed in details with its features and how to develop application for S40 based devices with example and demonstrated some projects in the real hardware and SDK. The importance of S40 series is illustrates for Indian needs and apps development for the low income group.

**Date: 12.07.2013**

**Topic: Database in Window Phone**

**By: Kishor K**

This session was to discuss the Database in Window Phone. Connectivity between SQLCE for local database and Window application were discussed with small application of creating the database and inserting and deleted the records from it. **Dr SRN Reddy** was clarifying some of the problems so that all the students implemented the databases and decorated in SDH and the Lumia 800 at the last. This was one of the one of the longest one and little difficult at the beginning to teach and explain because of more programming. However, this session has been successfully done with collected effort including **Mr. redid Prasad** and presented to all the students with satisfaction and the same will be incorporated in their projects with modifications.

**Date: 13.07.2013 & 14.07.2013**

**Topic: Special lecture on Nokia ASHA & J2ME Series S40.**

**By : Mr. Rakesh SND NOKIA, Bangaluru**

The lecture was dedicated to programming for Nokia ASHA and J2ME Series S40 Devices.

**Note: Several other sessions on projects and project development have been conducted. And also, practical's, project reviews (5 reviews), tests (three) and assignments have been conducted. All the student projects groups 22 have presented and demonstrated their applications.**

## 4. Content and Schedule of the Course

### 4<sup>th</sup> Summer Training Program on “Mobile Architecture and Programming

#### using Windows Phone 7/8, J2ME (Series 40)

Organized by Indira Gandhi Delhi Technical University For Women  
(IGDTUW)

in collaboration with Nokia University Relations and Microsoft  
[An optional complementary Embedded Systems Design Course for Interfacing with  
Mobile Devices during project break]

(From 21-06-2013 to 31-07-2013)

Date	Topics :				
	9-11AM	11-15 to 1-15 PM	2PM to 3-30 PM	3-45 to 4-45PM	4-45 to 5-45
Day 1	Inauguration and Introduction to MAP and 4 <sup>th</sup> STP	Introduction to Mobile Architecture	Demo of the Mobile Components	Lab	Practice
Day2	On Chip Components of the Mobile and their access-I	On Chip Components of the Mobile and their access-II	Software Components of the Mobile and its role	Demo and the case study	Practice
Day 3	Introduction to OMAP / Snapdragon Architecture	Demo	OMAP Application	Demo	Practice
Day 4	ARM Architecture/ Windows Architecture and Programming	Lab	Mobile Architecture Vs Computer Architecture ( Booting, File System, OS, Memory, Processor etc)	Case Study ( Nokia Mobile, WP, PC, Laptop )	Presentation of the case study
Day 5	Tool Chain for Mobile Development (WP)	Demo	Installation of OS, formatting of Mobile, Language files, Flashing etc Demo with Nokia Phone	Demo	<b>Test/ Quiz 1</b>
Day 6	Introduction to WP 7/8	Demo	New Features added to WP 8	Demo and Practice	Practice
Day 7	WP UI controls and Data Binding -I	Lab	WP UI controls and Data Binding 6II	Demo	Practice
Day 8	WP programming for Multimedia(Audio, Video, Images)	Demo and Exercises	WP programming for Camera Access	Demo and Lab	Practice
Day 10	Mobile Database -I	Mobile Database -II	Telephone Module (SMS, Calling, Email)	Demo and Exercise	<b>Test/ Quiz2</b>
Day 11	Memory Management in WP ( Isolated Storage)	WP programming for in-built Sensor -I	WP programming for in-built Sensor - II	Demo and Exercises	Practice
Day 12	Communication Services (REST	Demo and Exercise	File Streaming and File	Demo and Exercise	Practice

	services, Soap Ria services, TCP, WCF and many more)		Handling with real life examples		
Day 13	Introduction to Nokia OS S40 Asha series.	Theory	Nokia SDK 2.0 Installation and Demo	Lab	Practice
Day 14	Enhanced APIs for Touch (S40)/ LWUIT for richer UIs (S40)	Lab with the devices	Integrated Maps API for Java ME (S40).	Lab with the devices	Practice
Day 15	Enhanced Location Feature/Sensor Emulation (S40)/ Multiple Touch Simulation for (S40)	Lab with the devices	Programming through J2ME	Introduction to other Mobile development platforms.	<b>Test/ Quiz3</b>
Day 16 to 23	<p align="center"><b>Starts Mini project including Abstract, SRS and Technical Paper writing project implementation and document generation.</b></p> <p align="center"><b># Those students who are interested in building reprogrammable Embedded Systems (based on 8051) from the components can join during the project break.</b></p> <p align="center"><b>Embedded Systems Design Course [These systems may be interfaces with the Mobile devices to monitor and control remote systems.]</b></p>				
Day 24	Problem/Doubts clear sessions of project and review				
Day 25 to 29	<p align="center"><b>Project presentation ( Apps development based on S40 and WP platform, Reviews, Documentations, expert lectures, deployment, demos, presentations, Technical Paper Writing and best project selection</b></p>				
Day 30	Future Directions and R&D	Further project Assignment ( To continue with practice and for their final year project )	<b>Feed Back and Discussion</b>	Valedictory ( Award and Certificate Distribution, formation of Indian Mobile Architecture and Programming Chapter)	

### 5. Details of the Participants

<b>Reg. No.</b>	<b>Name of Students</b>	<b>Add. of College</b>
1	Nikhil Malik	PTUGIS Campus, Bhatinda
2	Swati Rana	PTUGIS Campus, Bhatinda
3	Vishakha Singal	Purnima Institute of Engineering & Technology
4	Saurabh Sharma	Manipal University, Jaipur
5	Saurabh Godika	Purnima Institute of Engineering & Technology
6	Prachi Jain	IGDTUW
7	Disha Sharat	IGDTUW
8	Isha Gupta	IGDTUW
9	Parul	IGDTUW
10	Ashna Aggarwal	IGDTUW
11	Manali Verma	IGDTUW
12	Sonal	IGDTUW
13	Aakansha	BPIT
14	Shantanu Rathore	Bhagwan Parshuram Inst. Of Tech.
15	Vardhman Jain	Hansraj College,DU
16	Mayank Rai	USIT
17	Jatin Mahajan	USICT
18	Pratik Sisodia	Purnima Institute of Engineering & Technology
19	Prabhanshu Attri	Amity School Of Engineering & Technology, Palam Vihar
20	Shubham Gupta	Noida Institute of Engineering & Technology, Gr. Noida
21	Arpit Sharma	Amity School Of Engineering & Technology, Palam Vihar
22	Gull Kaur	IGDTUW
23	Pushpender	BMIET, Sonapat
24	Ashu Rawat	College of Technology, Pantnagar
25	Priyanka Sharma	ASET, Delhi (IP Univ.)
26	Gaurav Saraswat	MAIT
27	Siddharth Kacchotia	MAIT
28	Himanshu	MAIT
29	Ankur Garg	MAIT
30	Ankit Manderna	MAIT
31	Nitin Thakkar	BVCOE
32	Lobsang wangmo	IGDTUW
33	Manju Sharma	MSIT

34	Baby Chaudhary	Maharaj Surajmal Institute
35	Dhanesh Khurana	AIT, Gurgaon
36	Neha	Ansal Institute of Technology
37	Pawan Kumar	ASET, Bijwasan
38	Manik Mahashabde	ASET, Bijwasan
39	Subhajeet Dey	ASET, Bijwasan
40	Anshul Baweja	BMIET
41	Sushant Saini	Amity School Of Engineering & Technology
42	Mohd. Maaz UL Islam	ASET, Bijwasan
43	Pranay Khatri	Amity School Of Engineering & Technology
44	Divya Jain	IGDTUW
45	Kajal Goel	IGDTUW
46	Akshay Tripathi	Maharaja Agrasen Institute of Technology
47	Pooja Malhiyan	IGDTUW
48	Nitishi Shubham Ralput	Veera College of Engineering(UPTU)
49	Romit Dhiman	JNGEC(H.P)
50	Shilpa Dhiman	IGDTUW
51	Kalpana Arya	IGDTUW
52	Komal	MAIT
53	Himanshu Gupta	Lord Krishna College of Engineering
54	Shrishti Saxena	Lord Krishna College of Engineering
55	Neetu	IGDTUW
56	Tabassum Parween	IGDTUW
57	Jaskirat Singh	GTBIT, Rajauri Garden
58	Manik Chawla	MAIT
59	Kanchan Jain	Indraprastha Engg. College
60	Alok Kumar Tayagi	Dronacharya Group of Institution



## 6. Quiz

Three quizzes have been conducted at regular intervals during the training program in order to test and evaluate the performance of each student. The results of these tests have been declared in the following working day of the test. The students have been encouraged to understand the concepts and reproduce the same by awarding the best one in the quiz. The question paper and the answers have been placed for ready reference.

### 1<sup>st</sup> QUIZ : MOBILE ARCHITECTURE & PROGRAMMING SUMMER

#### TRAINING(Dated: 28<sup>th</sup> June'2013)

4th Summer Training Program on Mobile architecture and Programming by using Windows Phone 7/8, J2ME (Series 40)

Quiz 1 for 21-06-13 to 28-06-13

.....  
1. Krait belongs to which family of processors?

a. Snapdragon b. ARM Cortex 15 c. Intel d. Adreno

**Answer: Snapdragon**

2. CLR is a \_\_\_\_\_?

a. Compiler b. Interpreter c. Virtual Machine d. Assembler

**Answer: Virtual Machine**

3. Windows Phone 7 OS is based on which kernel?

a. Windows CE 6.0 b. Windows 95 c. Windows Mobile d. Linux

**Answer: Windows CE 6.0**

4. Scorpion S2 or S3 processors are product of\_\_\_\_?

a. Qualcomm b. Intel c. ARM d. Texas Instrument

**Answer: Qualcomm**

5. Which is the fastest memory in Mobile ?

a. Nand Flash b. Nor Flash c. Memory Card d. None

**Answer: Nor Flash**

6. Which mobile development is an example of RTOS?

a. Android c. iOS d. Windows Phone 7/8 e. All.

**Answer: All**

7. Windows Phone supports?

a. C Lang b. Java c. C# d. All

**Answer: C#**

8. The SoC of the Mobile consists of ?

- a. Memory b. Processor c. Both a and b d. None

**Answer: Both a and b**

9. Which one of the following library must be included for Camera Task.

- a. Microsoft.Phone.TaskModel .c Microsoft.Device.Tasks
- b. Microsoft.Phone. d. Microsoft.Phone.Tasks

**Answer: Microsoft.Phone.Tasks**

10. Advantage of Mobile App development

- a. SDK is free b. Publication of APPS is easy
- c. Due to the emulator d. All

**Answer: All**

**2<sup>ND</sup> QUIZ : MOBILE ARCHITECTURE & PROGRAMMING SUMMER TRAINING**  
**(Dated: 05<sup>st</sup> July'2013)**

**4th Summer Training Program on “Mobile architecture and Programming by using Windows Phone 7/8, J2ME (Series 40) IGDTUW**  
**Quiz 2 Date: 5-7-13**

.....  
1. Which one of the following will return the data to the calling function.

- a. Launcher b. A & B c. Chooser d. None

**Answer Chooser**

2. Which Namespaces has to include before using Launcher / Chooser.

- a. Microsoft.Phone c. Microsoft.Phone.Tasks  
b. Microsoft.Phone.Tasks.Model d. Microsoft.Device.Tasks.Model

**Answer Microsoft.Phone.Tasks**

3. Which NameSpace(s) has to include before using Isolated Storage

- a. System.IO.IsolatedStorage c. Both a & d  
b. System.Collection.Generic d. System.io

**Answer Both a & d**

4. Which Method is needed to override for getting the data on the Navigated Page.

- a. OnNavigation() b. OnNavigationFrom() c. OnNavigationTo() d. None

**Answer OnNavigationTo()**

5. Which Database is supported by Windows Phone 7

- a. SQL Server b. MySQL c. SQL Server CE d. Oracle

**Answer SQL Server CE**

6. Isolated Storage can be

- a. Card Memory b. Phone Memory c. Both a & b d. RAM Memory

**Answer Both a & b**

7. Video Play is supported in

- a. Emulator b. Device c. Both a & b

**Answer Device**

8. Which video format is supported by WP7

- a. avi b. WMV c. Both a & b d. WVM

**Answer WMV**

9. In Windows Phone Environment which task can enter into Tomb Storming

a. Choosers Only b. User Process c. Launchers Only d. ALL

**Answer User Process**

10. To play the audio following elements are mandatory

a. Video Element b. Media Element c. Audio Element d. Image Element

**Answer Media Element**

## 7. Feedback Form “Mobile architecture & Programming-STP4

(21-7-2013-28-7-2013)

Please rate each session on the scale of 10 (1 represents the lowest and 10 represents the highest)

Titles of the sessions	Quality of the presentation	Technical Know-how	Practical knowledge	Overall rating	Suggestions if any
Keynote Lec by Prof. M.Balakrishnan from IIT, Delhi.					
Int to Mobile Architecture by Dr. S.R.N. Reddy					
Tool Chain for Mobile Development(WP)					
Lec on the Mobile Components by Dr.S.R.N.Reddy					
Lec on Windows Phone Architecture by Dr. S.R.N. Reddy and Mr. Vineet Kumar Sahu.					
Lecture on Silverlight by Dr.S.R.N.Reddy					
Introduction to UI Control by Mr. Vineet Kumar Sahu.					
Introduction to Windows Phone by Expert - Dr. B.V.R Reddy					
Introduction to Project Development by Dr.S.R.N. Reddy					
Testing of Application On Nokia Lumia 800 Device by Dr. S.R.N. Reddy					
Lecture on Windows Phone 7 Libraries Dr.S.R.N. Reddy					
Lecture on Camera Task by M.R.P Reddy.					
Labs: Dr.SRN Reddy	N/A				
Labs: Mr Vineeth					
Lab: M.R.P Reddy(Installation)					

1. Do these sessions meet your overall expectations in this week?
2. Do you want to extend the duration of the Lab or theory or parallel sessions (lab & theory both in class only)?

## 2<sup>nd</sup> Feedback Form for Summer Training Program (1-07-2013 to 05-07-2013)

Titles of the sessions	Quality of the presentation	Technical Know-how	Practical knowledge	Overall rating	Suggestions if any
Lec on Audio Player ó by Dr. S.R.N. Reddy					
Lec. on Video Player ó by Dr. S.R.N. Reddy					
Lec. on Isolated Storage(2) ó by Dr. S.R.N. Reddy					
Lec on Debugging ó by M.R.P Reddy.					
Introduction to choosers and launchers- by Dr. S.R.N. Reddy					
Lec. on Bluetooth Technology by Dr. (Mrs.) <i>Nupur Prakash</i>					
Introduction & Demo on Metro Style by Mr. Vineet Kumar Sahu.					
Lec. on Layout by Mr. Vineet Kumar Sahu.					
Lec.on Windows Phone Life Cycle and blend - by Dr. S.R.N. Reddy					
Lec. Windows Phone 7 Class Libraries- by Dr. S.R.N. Reddy					
Lec. on Windows Phone Connectivity- by Mr. Kishor Barthwal					
Lec on Page Navigation - by Mr. Vineet Kumar Sahu.					
Labs/Project: Dr.SRN Reddy	N/A				
Labs/Project: Mr Vineeth					
Lab/Project: M.R.P Reddy(Installation)					
Labs/Project: Kishor Barthwal					

1. Does these sessions meet your overall expectations (in this week)?
2. Do you want to extend the duration of the Lab or theory or parallel sessions (lab & theory both in class only)?

## 8. Projects Abstracts

### 1 Project : G3

**Project Title:** FOOD MANIA

**Team Members:** Parul, Disha

#### **Objective:**

This app lets you look at menus, pictures for 5 popular chain restaurants in Delhi.

It gives menus, pictures, contacts , prices and all other information you need to choose a restaurant for dine out , take away and delivery It allows to automatically call by clicking the number through the application.

The 5 chain of restaurants that we will be covering are:

- Café Coffee Day
- McDonalds
- Haldiramø
- Dominos
- KFC

### 2 Project : G4

**Project Title:** Phone for kids-all in one activity centre

**Team Members:** Ashna Aggarwal, Prachi Jain, Isha Gupta

#### **Introduction:**

Mobile- a bane or a boon?? is a question which baffles everyone in the society today. But the ever advancing technology has to a great extent proved it to be a boon.

Children today are fascinated by every gadget they come across especially the mobile devices because of their portability and ease to access.

Windows phone today provides you with a feature of a kids' corner which allows a separate interface for kids.

#### **Objectives:**

The perfect app for your little one's learning and playing experience. Come enjoy the beloved Phone for kids app with brand new beautiful graphics and exciting new features!

Transform your phone to the cutest virtual toy phone in windows store. The phone has it all: PLAY AND LEARN!!!

Fun filled educational games and activities:

- 1.ABC you and me :- Learn the 26 alphabets with colorful images.
- 2.SMS chat :- Text messages to yourself.
- 3.Touch dial phone :- Learn numbers from 0 to 9.
- 4.Shape master:- Dot to dot game which will help you learn the basic shapes.

5. Music loops:- Create beautiful music with instruments that sound great together.

6. Memory tiles :- Enhance your memory by matching the tiles.

### 3 **Project : G6**

**Project Title:** Cloud based Learning using Windows Phone7

**Team Members:** Baby Choudhary, Manju Sharma

**Introduction:**

This project is to provide cloud-based learning on mobile devices. The Algorithms, Code, Exercises and related Compilers will be placed on Clouds. Compilation and other computational work will be done on clouds. Students can access Algorithms, run programs and even measure the performances of the different algorithms of Data Structure on their mobiles. They can do their practical on Mobiles. This is how the project can increase their understanding.

**Objective:**

- To create project cloud-based learning using Windows Phone 7.
- Provides the most effective learning experience on mobiles.
- Increase practical knowledge of the respective subject.

### 4 **Project : G8**

**Project Title:** Food & Health

**Team Members:** Shilpa Dhiman, Romit Dhiman, Kalpana Arya, Lobsang Wangmo

**Introduction:**

Smartphone technology and health applications are transforming health promotion. Smartphones are mobile devices with additional capabilities such as e-mail, text messaging, video viewing, and wireless Internet access. Applications, or apps, are downloadable software products that run on mobile devices. The emerging health technologies support Health Communication and Information Technology goals and objectives which include the increased use of mobile devices to improve health outcomes and health quality and achieve health equity.

### 5. **Project : G10**

**Project Title:** AUSHDHI( DavaDaaru)

**Team Members:** Vardhman Jain, Siddharth Kacchotia, Himanshu

**Introduction:**

India's medical industry is growing rapidly. But due to lack of health awareness , there is an immediate need to develop an app which caters to the need of large chunk of people.

Our medical app helps the user to check the status of a medication whether it is banned or not and schedule his/her medicine intake on the daily basis according to their age as well as requirement, search for a clinic/hospital and also provide precautions for diseases.

**Objective:**

The main objective is to develop a reliable and comprehensive medical app which provides detailed precautions on diseases like Asthma, Cardio and Diabetes, reminders for daily medicine intake, platform to check medication status whether it is approved or banned and navigation service for searching clinic/hospital which are convenient to a user by deploying an app in Windows Market Place.



## 6 Project : G11

**Project Title: BEST FARE APPLICATION**

**Team Members: Divya Jain, Kajal Goel, Pooja Malhiyan**

### **Objective:**

In today's fast and capital-prime world, there is a need for devices and applications that help us save time and money. With the development of Mobile Technology, we see an immense pool of such applications in the market today. Hence, working towards a similar objective, we intend to develop an application that will help us in making our daily travelling cost-effective.

- \* It estimates the minimum fare for reaching a destination point from a particular place.
- \* It highlights the path to be taken on map.
- \* It suggests the vehicle to be boarded.
- \* The cost optimization is done on the basis of number of people, time of travelling and the distance

## 7 Project : G13

**Project Title: Good Deed – Donation App**

**Team Members : Prabhanshu Attri, Shubham Gupta, Arpit Sharma**

### **Objectives:**

- To provide an easy platform for making donations in various ways to various organisations
  - ✓ Financial donation.
  - ✓ Educational benefits.
  - ✓ Donation in kind like clothes, books, gadgets etc.
  - ✓ Non-materialistic help like spending time with them.
- To provide a direct and secure mode of transaction

## 8 Project : G14

**Project Title: Exam Suite**

**Team Members : Nikhil Mallik, Swati Rana, Pardeep Kumar, K Vishal Reddy**

### **Objectives:**

Our prime objectives with *Examination suite* are as follows:

1. To provide general information about the chosen examination like eligibility criteria, dates of the examinations, etc
2. To help equip students to get exam related information like relevant books, coaching institutes and reference websites
3. To help prepare students for the examinations by providing complete tests or section specific tests
4. To provide detailed analysis of the tests taken inside the application.
5. To notify the students about the results as soon as they are announced using Push notifications
6. To provide a centralized platform for students to prepare for any examination under UPSC/SSC

7. To update information dynamically in the device as soon as there is any important notification.

## 9 Project : G15

**Project Title: Phone NumberTracker**

**Team Members:** Pradeep Kumar, Alok Kumar Tyagi, Kanchan Jain

**Objective:**

PHONE NUMBER TRACKER software is to solve all the problems that are faced by an individual related to phones.

- 1.) Through this application one can get to know who the service provider is.
- 2.) Through this application one can get to know exact location of caller that is the country, state and the nearby cities from which that number belongs.
- 3.) To find out the STD code by providing the state.
- 4.) To find out the pin code of any particular area.
- 5.) Exact or nearby location of the mobile device can be shown on Google map. So it tells the path also.

## 10 Project : G16

**Project Title: Procam Editor**

**Team Members:** Manik Chawla, Jaskirat Singh

**Objective:**

In today's scenarios, technology has become a boon for us and one cannot think of a single day without using smartphones. We use our smartphone devices for a variety of purposes like calling, messaging, surfing internet and multimedia or listening to songs, clicking pictures, watching a movie or playing graphically intensive games.

## 11 Project : G17

**Project Title: Calock**

**Team Members:** Gaurav Saraswat, Ankur Garg, Ankit Mandern

**Objective:**

This app served the purpose of calculations without disturbing our privacy. We can only access our data only after unlocking the phone, this app works like an emergency function in normal phone in which we can call emergency number like 100, 101 etc..without unlocking the phone, in similar way this app will work.

## 12 Project : G18

**Project Title: Cloud based Learning using Windows Phone7**

**Team Members:** Gull Kaur, Neetu, Tabassum

**Introduction:**

- Now a days, people are not aware that what is good to eat? So to aware those that how they could be Healthy and free from diseases, we are developing an application named as 'YOUR DIET'.
- As being healthy and physically fit should be a priority, our application will provide them some data that what should they eat. The benefits of being healthy are endless. Our quality of life depends on the quality of our health.

- There are many applications in Windows Phone which tells how they could be healthy, but in this application we are integrating many things such as which type of fruits & vegetables should they eat, diet for children, adults, teenagers & above 50 persons and many more such things.

**Objective:**

- People should be aware about what they should eat.
- People should make right choices what they should give their children to eat.
- People should be healthy and fit.
- People will know what the advantage of item which they are eating is.

13 **Project : G21**

**Project Title: MetroGuide -An Interactive Routing System**

**Team Members: Mohd. Maaz, Subhajeet Dey, Manik Mahashabde, Pawan Kumar**

**Introduction:**

The App Will feature a full-fledged Map and Routing service, including metro transit times, and it will estimate the total fare from one station to another, it will also assist the user to route through the station and find their way through confusing stations networks. The app will also find the nearest metro station and give the location of the station from the user. Also it will calculate the time taken to reach the station approximately.

**Objective:**

To provide the user with an interactive application that offers offline maps and routing through different Metro stations located in Delhi. The application revolves around the mapping and fare of different Metro stations in an organised manner that provides the user with assisted-navigation and provides an estimate of the actual fare required to reach the desired location.

## 9. Message from Coordinator

It is a great experience to interact with the students who came from different parts of the country to attend STP4. I really felt very happy to train them in Mobile Architecture and Program and Guide their projects. They have shown keen interest in understanding and applying the concepts that we have taught in the class room in their projects.

It also a learning experience from some of the students who have shown their skills in implementing their own ideas into reality. We have focused mainly into the application development to the need of the society. Like, Carbon credits, online examination through mobile, schedule SMS, Mobile Shopping, QR codes for security and many more.

It is a beginning for the students to climb the mountain and we tried to make a strong base and compete with the peers. It also provides a platform to work with groups in a coordinated and disciplined manner.

I express my sincere thanks to all the resource persons who have made this training a great success. I also thank Mr. Suresh Chande who supported at each stage and also our CSE team and staff. The constant encouragement, suggestions and participation by our Honorable Vice Chancellor, Prof. Nupur Prakash really helped me to conduct this training for 6 weeks without any problem. I extend my sincere thanks to her. I express my sincere thanks to Registrar, for granting the permission to conduct the STP4 and having the trust in us.

Finally, my best wishes to all the participants and I pray God to give good health to all of us.

Your

SRN Reddy.

### **13. Sponsorship from Nokia University Relations, Finland and Nokia R&D, Bangalore**

Nokia is the main sponsor and support for this training and have sponsored

1. 20 N900 Mobile devices and 30 E63 devices to conduct practicals and project implementation.
2. Some training Material and latest tools.
3. Few experts from Nokia to deliver the special Lectures
4. Guidance and support in complete implementation of the projects
5. Awards to students(4 N900 devices) for best project and best Idea are also sponsored by Nokia.
6. Several Lumia and Asha platform devices

Our sincere thanks to Mr. Suresh for his constant support and encouragement at each stage. You can reach him at

[Mr. Suresh Chande,](#)

[Technical Product Owner Mobile Office ,](#)

[NokiaIndiaUniversity Relations Representative](#)

[Devices R&D Maemo SW Applications, Finland.](#)

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## 10. List of Winners

Awards in the following category were given during the valedictory ceremony on 31<sup>st</sup> July, 2013 at IGDTUW, Delhi by the Vice Chancellor, IGDTUW and Prof. H.M. Gupta, IIT Delhi.

**Best Student Award :** Mr. Vardhaman Jain, Hindu College, Delhi University

**First Best Project Award : “Exam Suite”** Mr. Nikhil Malik, Swati Rana, Pardeep Kumar, K.Vishal Reddy.

**Second Best Project Award: “Metro Guide”** Pawan Kumar, Manik Mahashabde, Subhajeet Dey, Mohd. Maaz UL Islam.

**Third Best Project Award : “Toy Town”** Prachi Jain, Isha Gupta, Ashna Aggarwal .

**First Best Technical Paper : “Study of Pandaboard and Interfacing Peripherals”** Akshay Tripathi, Komal, Himanshu Gupta, Shrishti Saxena.

**Second Best Technical Paper and App: “Best Fare App”** Divya Jain, Kajal Goel, Pooja Malhiyan

### Details of Devices awarded for Winners:

Awards	Device	IMEI No.
Best Student Award	Nokia Lumia 820	354105052573986
First Best Project Award	Nokia Lumia 820	354105052568838
Second Best Project Award	Nokia N9	357923046562007
Third Best Project Award	Nokia Asha 311	355193054201185
First Best Tech Paper	Nokia Asha 311	355193054201706
Second Best Tech Paper and App	Nokia Asha 311	355193054202373