Department of Computer Science

A Report on Workshop

Topic on

"ANDROID APPLICATION DEVELOPMENT"

Session- 2015-16

The Workshop was *conducted* on *"ANDROID APPDEVELOPMENT"* held on **6th & 7th** November in *association with TECHKRITI'16 IIT KANPUR organized by Training Bulls. This Workshop was held under the supervision of* Assistant Professor, Head, Department of Computer Science **"Dr.S.Pavani"**.

Description about the Program-

The workshop was inaugurated by, **Prof. G.D. Sharma**, Honorable Vice-Chancellor, in Bilaspur University, Bilaspur, **Dr. H.S. Hota**, Dept. of Computer Science & Application in Bilaspur University Bilaspur, **Mr. Sanjay Dubey President of Governing Body, Principal Dr.D.K.Chakroborty** C.M. Dubey P.G. College Bilaspur.

<u>Context of Workshop-</u>

Participants- A total of 92 Students participated in this workshop held in C.M. Dubey P.G. College. UG & PG students participated in the workshop.

The Workshop is inaugurated in B.Ed hall of the college on 6th Nov. 2015 at 10 a.m. After the inauguration of the workshop, the course lecture started by the guest faculty, who came from Training bulls & Techkriti 2016 IIT Kanpur. 4 to 5 participants were made one group in the workshop.

The two-day workshop was divided into sessions. The First day divided into 2 sessions. In session1 (Before Lunch) covered all the basic parts, who is needed to know to develop android applications, such as Java, XML, Android features &android development environment, etc. These all the concepts were explained by the guest faculty, very easily, in less time duration.Session2was started after the lunch break. This session was covered the fundamental part of android application & also initiated the programming part to develop anandroid application in a mobile phone.

The participant enjoyed this session. Because coding, GUI & practical implementation, parts were included. They were able to initiate the development of an android application after the end of the whole session. They developed an application for sending messages at the end of the day. The Participants were very curious to attend the next day lecture because they learned much more interesting topics related to the Android application in the whole day. The Participant was given some homework & asking some multiple-choice questions to revise the entire course work of the day. They were developed many android applications such as calculator App, Android media applications (Playing Audio/Video), etc in the second day.

A **Quiz competition** was held in Session2. The Winner's group's name was announced after the end of the competition. Trophy and certificate were distributed to the winner group. Each participating was distributed certificates, at the end of the program.

The **1ˢᵗwinner group** of the competition was the class of **BCA 3ʳᵈ year** students. The name of the students was Anupma Pandey, AlkaMinj, Ankit Sharma,M.D Shahrukh,Vijay Kamal. The **2ⁿᵈwinner group** of the competition was also the class of **BCA 3ʳᵈ year** students. The name of the students was Renuka Vishkarma, Shikshita Dwivedi, Balwant Kumar, Priyanka Singh, Neelam Singh. The3ʳᵈ**winner group** of the competition was the class of **M.Sc. Previous** year students. Name of the students was Pension Gendre, Chatrapal Gendre, Vijay Tiwari, Nidhi Mishra, Preeti. The **4ᵗʰwinner group** of the competition was the class of **M.Sc. Final** year students. The name of the students was Daneshwar, Jay kumar, Neha Singh, VivekThadani.

Android is an open-source and Linux-based **Operating System** for mobile devices such as smartphones and tablet computers. Android was developed by the *Open Handset Alliance*, led by Google, and other companies. Android offers a unified approach to application development for mobile devices which means developers need only develop for Android, and their applications should be able to run on different devices powered by Android. The source code for Android is available under free and open-source software licenses. Android programming is based on Java programming language

Duration- 2 Days (7-8 Hours)
Course Content-
Day1ˢᵗ
Session 1 (Before lunch)
Introduction to Java

- Oops concept

- Class and objects

- Inheritance

- Polymorphism

Introduction to XML

- Basics of XML

Introduction to Android

- Overview of Android and Android SDK

- History of Android

- Android features

Android Architecture overview

- Introduction to OS layers
  - Linux kernel
  - Libraries
  - Android Runtime
  - Application framework

Setup of Android Development environment

- System requirements
- Eclipse and SDK installation, AVD creation
- Creating first Android application
- Project Structure

Session 2 (After Lunch)

Android App. Fundamentals

- Android application building blocks
- Activating components
- Shutting down components
- Lifecycle of Application
- Development tools, Manifest File
- Lifecycle of Activity

User Interface

- View Hierarchy and Layouts & UI Events

Day 2nd

Main Building Blocks

- Activity
- Intents
- Content Providers
- Broadcast Receivers

Introduction to Data Storage

- SQLite Databases

Android Media API

- Playing audio/video

Session 1

Projects to be covered

- Get and Set

- Toast Maker

- SMS Manager

- Fresh GPS

- Annotation

Session 2

Competition

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