"Techno-Social Excellence"
Marathwada Mitra Mandal's
INSTITUTE OF TECHNOLOGY (MMIT)
Lohgaon, Pune-411047.

"येथे बहुतांचे हित"

"Towards Ubiquitous Computing Technology"
DEPARTMENT OF COMPUTER ENGINEERING

NOTICE

Date: - 1/10/2019

This is to inform all the students of BE that the **Department of computer engineering** is organizing Workshop on Lab Practice-II on **3rd October 2019 (Thursday).**
Workshop will cover all Theory and Practical Implementation of PUC and MC in Lab Practice-II

Details of Workshop:
Venue:- Department of computer engineering, MMIT, Lohgaon, Pune
Class Room: E-102
Date: 3rd October 2019
Time: 10.30 AM to 12.30PM

Ms.Y.P.Warke
Ms.S.S.Mande
(Coordinator)

Mr. S. G. Rathod
(HOD)

HOD
Comp. Engg.
Marathwada Mitra Mandal's
Institute of Technology (MMIT)
Lohgaon, Pune - 411 047

"Techno-Social Excellence"

Marathwada Mitramandal's

INSTITUTE OF TECHNOLOGY (MMIT)

Survey No. 35, Plot No. 5/6, Lohgaon, Pune 411 047.

Voucher No.

Date:- 5/10/19

Account Head : Guest lecturer Remuneration Ale

Particulars	Amount
Name : Y.P. Warke Acc. No.:- 50100226907648	1000/-
Remuneration for workshop	
Theory:- 500 per hour	
Practicals- 500 per hour	
Total :- 1000	
I have paid Rs. 1000/- to Mr. Ashish Shahane workshop is Conducted for BE students. (Syllabus subject)	
Total Rs.	1000/-

Received from Principal, Marathwada Mitramandal's, INSTITUTE OF TECHNOLGY, a sum of Rupees one Thousand only as specified above.

Principal
Marathwada Mitra Mandal's
INSTITUTE OF TECHNOLOGY,
Lohegaon, Pune-47

INSTITUTE OF TECHNOLOGY PUNE-47

Stamp

Date: 3/10/2019

Acceptance Letter

I am Mr. Ashish Shahane. I am working in Shreyash IT Solutions. I have delivered Hands on session on Concepts of "Pervasive Ubiquitous Computing and Mobile Communication" on 3/10/2019 at Marathwada Mitra Mandal's Institute of Information technology, Lohgaon for Final year students

Venue: Computer Centre Lab

Time: 10.30 am to 12.30 pm

Remuneration received: Rs.1000/-

Arranged By

Ms. Y.P.Warke

Mrs. S.S.Mande

Received By

Mr. Ashish Shahane

MM INSTITUTE OF TECHNOLOGY PUNE-47

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MARATHWADA MITRA MANDAL'S
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S.No.35, Plot No. 5/6, Lohgaon, Pune-411 047
Approved by AICTE, New Delhi, recognized by Government of Maharashtra and afiliated to Savitribai Phule Pune University (ID No. PU/PN/Engg/330/2008)
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Website: http://www.mmit.edu.in
Email: mmit@mmit.edu.in
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3/10/2019

Department of Computer Engineering

(Academic Year 2019-20)

Report On

One Day Workshop on "LP II"

Held on
3rd October 2019

Coordinator
Ms. Y.P.Warke
Mrs. S.S.Mande

HOD
Prof. S.G.Rathod

INSTITUTE OF TECHNOLOGY PUNE-47

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Tel. No. 7447786623 Website: http://www.mmit.edu.in
Fax No.: 7447786624 Email: mmit@mmit.edu.in
येथे बहुतांचे हित

Workshop Details

Subject: LP-II
Date: 3rd October 2019
Time: 10.30 AM-12.30 PM
Venue: MMIT College,Lohgaon,Pune
Department Of Computer Engineering
Classroom E102
Resource Person Details: Mr. Ashish Shahane, Founder, Shreyash IT Solutions
Total No. of Students: 70

Objectives of Workshop

The Workshop was conducted for discussing the Lab Assignments of LP-II which include assignments based on Pervasive Ubiquitous Computing (PUC) and Mobile Communication (MC).

Following practical assignments are covered in workshop:

❖ **Pervasive Ubiquitous Computing (PUC)**

1. Design and build a sensing system using micro-controllers like -Arduino / Raspberry Pi / Intel Galileo to sense the environment around them and act accordingly.
2. Design and build an mobile application with context awareness to determine the remaining battery level depending on the users current usage patterns.
3. Design and build an music streaming system and a smart mobile application to use the speakers or headphones of the smartphone of multiple phones to stream stored / live music during a party (instead of using large speakers).
4. Smart Mobile Application with orientation sensing for users to put the phone in meeting / silent mode

❖ **Mobile Communication (MC)**

1. Design simple GUI application with activity and intents e.g. Design an android Application for Phone Call or Calculator
2. Design an android application for media player.
3. Design an android Application for SMS Manager
4. Design an android Application using Google Map To Trace The Location of Device

5. Design an android Application for Frame Animation

❖ **MiniProject**

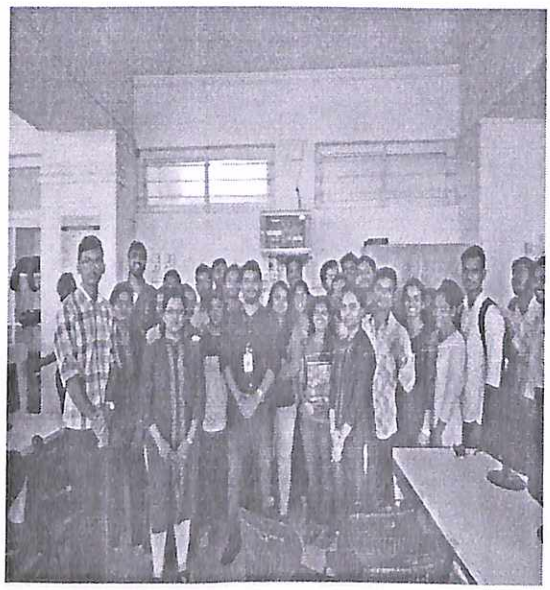
Design and build a "Multifunctional Application" in the Mobile and Pervasive domain and PUC. The choice of application is to be determined so as to leverage the capabilities of typical smart devices. These include such characteristics as,

- Messaging
- Microphone & Camera
- Media Player

Program Outcomes

- Students has understood concepts of Pervasive Ubiquitous computing and mobile communication
- Students has understood practical assignments based on Pervasive Ubiquitous computing and mobile communication
- Students got clear idea about implementation of mini project in above areas
-

Photos:



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INSTITUTE OF TECHNOLOGY (MMIT)
Lohgaon, Pune - 411047

"Towards Ubiquitous Computing Technology"

Department of Computer Engineering

Workshop:LP-II

Date: 3/10/2019

Sr. No	Name of the Student	Sign
1	Vinay N. Sanone (BCB-29)	
2	Mayuresh Arvind Gujar (BE-A-52)	
3	Bhushan Ashok Chaudhari (BE-A-12)	
4	Vaibhav santosh Thorat (BE-B-38)	
5	Shweta Bhausaheb Raskar (BE-B-19)	
6	Gauri Kailas Tapkir (BE-B-36)	
7	Rohan Sandeep Pawar (BE-B)	
8	Heena Kasam Beig (BE-A-6)	
9	Pradnya Sachin Chirme (BE-A 18)	
10	Varad Vijayrao Arthamwar (BE-A-5)	
11	Abhijeet Swami (BE-B-30)	
12	Bhange Komal (BE-A-08)	
13	Deshmukh Hrishikesh (BE-A-23)	
14	chaudhari vishal (BE-A-13	
15	Jadhav Amol (BE-A-34)	
16	Krushna sharma (BE-B-25)	
17	shaikh sohel (BE-B-24)	
18	Raipatrewar Vishvesh Sanjay (BE-B-16)	
19	Vikas Assade (BE-B-41)	
20	Mahajan Vaibhav Sanjay (BE-B-46)	
21	Simran Rajesh Sharma (BEB-45)	
22	Avinash Jambhale (BE-B-48)	
23	Shyamsundar Pawar (BE-B-52)	
24	Pranav Mhetre (BE-B-04)	
25	Mayur Ravindra Chavan (BE-A-51)	
26	Sajal Vinayak Nagalkar (BCB07	
27	Shubham Sanjay Gumaste (BEA47)	
28	Tepale Charudatta Avinash BE37 B	
29	Hase vishal vilas (BE A 33)	

Sr. No	Name of the Student		Sign
30	Talekar Shubham Shivaji	BE-B-35	
31	Tushar Raosaheb Bhike	BEA10	
32	Akshay Talekar	BEB-34	
33	Purna Ranaware	BEB-17.	
34	Swapnali Patole	BEB-18	
35	Prashant Patil	BEB-12	
36	Sushant Shukla	BEB-21	
37	Shweta Mundhe	BEB-05	
38	Hrishikesh Shelke	BEB-26	
39	vinod sarkave	BEB-22	
40	Kshitija Wakude	BEB-43	
41	Pratiksha Garkal.	BEA-30	
42	Pawar Sakshi	BEB-15	
43	Pratik Medidar	BEB 03	
44	Harish Chavan	BE-A	
45	Prateek Mahajan	BE-B 01	
46	Hrishikesh Rane	BE-B	
47	Omkar Tilekar	BE-B 39	
48	Jadhav Vyankat	BE-A 45	
49	Jadhav virendra	BE-B-50	
50	Prasad .V. Joshi	BE-A-50	
51	Adarsh Saji	BE-A 01	
52	Aniket Chavan	BEA-14	
53	Rohan Dere	BEA-22	
54	Swapnil S Patil	BCB-33	
55	Mohini chavan	BEA-16	
56	Priyanka Karde	BEA-39	
57	Salman Dauchi	BEA-20	
58	Saurabh Ghantelle	BEA-31	
59	Sunil Aghao	BEA-03	
60	Aniket Dandade	BEA-19	
61	Mrunyami. Purshotam. Bhat	(BE-A-9)	
62	Ganesh. Bhimrao. Gaikwad	(BE-A-27)	
63	Durga. Munje	(BE-B-)	
64	Shreekrushna Sanjayrao Chavan	(BE-A-	
65	Snehal. Vilas. Adhav.	(BE-A-2)	
66	Shraddha SHIVAJI Mali	(BE-B-02)	
67	Darshan. Nitin. Kokadwar	(BE-A-40)	

68 Snehal Saikar (BE-B-21)

69. Ketaki Kurane (BE-A-41)

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INSTITUTE OF TECHNOLOGY (MMIT)

Lohgaon, Pune-411047.

"Towards Ubiquitous Computing Technology"

Department of Computer Engineering

Ref. No. : MMIT/Comp/2019-20/ Date: 1/10/2019

Submitted:

Subject: About sanctioning of remuneration for Workshop.

Respected Sir,

The Workshop for BE Computer Engineering has been arranged on **3rd Octobar2019**. The topic of the Workshop is **"Theory and Practical Implementation on Concepts of Pervasive ubiquitous computing and Mobile Communication".** The sessions are divided into Lectures and Practical's.

This is an activity which Conduct on beneath **Lab Practice-II**, as per given in SPPU BE Computer Engineering Syllabus. The syllabus copy of BE Computer Engineering is attached herewith.

Details of workshop are as follows

Recourse Person: Mr. Ashish Shahane , App Developer at Shreyash IT Solutions.

Date: 3rd Octobar2019

Time: 10.30AM to 12.30PM (1hour Theory and 1hour practical)

Venue: Class Room- E -102

As per MMIT Circular, the remuneration sanction is Rs. 500/- Per hour for Theory and 500/- Per hour for Practical. Total amount for one day (1hour Theory and 1hour practical) is **Rs. 500+500=1000/-**

So, kindly sanction total remuneration as **Rs. 1000/-**

Cash of Rs. 1000/- should be drawn in the favor of Mr. Ashish Shahane

Thanking you.

Coordinator

Ms.Y.P.Warke

Ms.S.S.Mande

Through,

HOD

01/10/2019

INSTITUTE OF TECHNOLOGY * M M * PUNE-47

To,

The Principal,

MMIT, Lohgaon-47

Savitribai Phule Pune University
Fourth Year of Computer Engineering (2015 Course)
410247:Laboratory Practice II

Teaching Scheme:	Credit	Examination Scheme:
Practical : 04 Hours/Week	02	Term Work: 50 Marks Presentation: 50 Marks

Companion Courses: 410244 and 410245

Course Objectives and Outcomes: Practical hands on is the absolute necessity as far as employability of the learner is concerned. The presented course is solely intended to enhance the competency by undertaking the laboratory assignments of the core courses. Enough choice is provided to the learner to choose an elective of one's interest.

Laboratory Practice II is companion lab for elective course I and elective course II.

Guidelines for Laboratory Conduction

- **List of recommended programming assignments and sample mini-projects is provided for reference.**
- Referring these, Course Teacher or Lab Instructor may frame the assignments/mini-project by understanding the prerequisites, technological aspects, utility and recent trends related to the respective courses.
- Preferably there should be multiple sets of assignments/mini-project and distribute among batches of students.
- Real world problems/application based assignments/mini-projects create interest among learners serving as foundation for future research or startup of business projects.
- Mini-project can be completed in group of 2 to 3 students.
- Software Engineering approach with proper documentation is to be strictly followed.
- Use of open source software is to be encouraged.
- Instructor may also set one assignment or mini-project that is suitable to respective course beyond the scope of syllabus.

Operating System recommended :- 64-bit Open source Linux or its derivative
Programming Languages: C++/JAVA/PYTHON/R
Programming tools recommended: Front End: Java/Perl/PHP/Python/Ruby/.net, Backend : MongoDB/MYSQL/Oracle, Database Connectivity : ODBC/JDBC, Additional Tools: Octave, Matlab, WEKA.

Guidelines for Student Journal

The laboratory assignments are to be submitted by student in the form of journal. Journal may consists of prologue, Certificate, table of contents, and **handwritten write-up** of each assignment (Title, Objectives, Problem Statement, Outcomes, software and Hardware requirements, Date of Completion, Assessment grade/marks and assessor's sign, Theory- Concept in brief, Algorithm/Database design, test cases, conclusion/analysis). **Program codes with sample output of all performed assignments are to be submitted as softcopy.**

As a conscious effort and little contribution towards Green IT and environment awareness, attaching printed papers as part of write-ups and program listing to journal may be avoided. Use of digital storage media/DVD containing students programs maintained by lab In-charge is highly encouraged. For reference one or two journals may be maintained with program prints at Laboratory.

6.	Develop a program to plot the magnitude and phase response of a given system (given: h(n): impulse response of system S) (Observe the frequency response for different systems. Compare the frequency response of a system (filter) for different length h(n) i.e filter coefficients)
7.	**Mini-Project 1:** Design and Develop the N-point radix-2 DIT or DIF FFT algorithm to find DFT or IDFT of given sequence x (n). (Analyze the output for different N. Program should work for any value of N and output should be generated for all intermediate stages.)
8.	**Mini-Project 2:** Obtain the Fourier transform of different window functions to plot the magnitude and phase spectrums. (Window functions: Rectangular, Triangular, Bartlett, Hamming, Henning, Kaiser. Observe and compare the desirable features of window sequences for different length. Observe the main and side lobes)
9.	**Mini-Project 3:** Design an FIR filter from given specifications using windowing method. (Application should work for different types of filter specifications i.e. LPF, HPF, BPF etc and all window sequences. Plot the frequency response for different frequency terms i.e. analog and DT frequency)
10.	**Mini-Project 4:** Design of IIR filter for given specifications using Bilinear Transformation. (Generalized code to accept any filter length for a transfer function H(Z). Application should work for different types of filter specifications i.e. LPF, HPF, BPF etc. and for different transfer functions of an analog filter)
	410244(B): Software Architecture and Design Patterns
1.	**Mini-Project 1**: Narrate concise System Requirements Specification and organize the problem domain area into broad subject areas and identify the boundaries of problem/system. Identify and categorize the target system services with detailed service specifications modeled with component diagram incorporating appropriate architectural style and coupling. Design the service layers and tiers modeled with deployment diagram accommodating abstraction, autonomy, statelessness and reuse. Map the service levels and primitives to appropriate Strategies for data processing using Client-Server Technologies as applicable.
2.	**Mini-Project 2:** Select a moderately complex system and narrate concise requirement specification for the same. Design the system indicating system elements organizations using applicable architectural styles and design patterns with the help of a detailed Class diagram depicting logical architecture. Specify and document the architecture and design pattern with the help of templates. Implement the system features and judge the benefits of the design patterns accommodated.
	410244(C): Pervasive and Ubiquitous Computing
Mini-Projects are to be designed so as to use, • No / minimal extra hardware, • uses open source software's, • need hardly any subscription / telephony / data charges.	
1.	Design and build a sensing system using micro-controllers like - Arduino / Raspberry Pi / Intel Galileo to sense the environment around them and act accordingly.
2.	Design and build a mobile application with context awareness to determine the remaining battery level depending on the users current usage patterns.
3.	Design and build a music streaming system and a smart mobile application to use the speakers or headphones of the smart phone of multiple phones to stream stored / live music during a party (instead of using large speakers).
4.	Smart Mobile Application with orientation sensing for users to put the phone in meeting / silent mode- OR- outdoor/ loud mode based on the orientation of the device. -OR- Smart Mobile Application with ambient sound / noise sensing to adjust the volume of the

	phone automatically. -OR- Smart Mobile Application with ambient light sensing to adjust the screen brightness automatically.
5.	**Mini-Project 1:** Smart Mobile Application for Location-Based Messaging Design and build a Location-Based Messaging system where users have commented on various eating joints in the area you currently are. The mobile application should give you inputs / recommendations / suggestions on which eating joints are preferred by whom and for what eating items, with their ratings etc.
6.	**Mini-Project 2:** Smart Mobile Application as a Museum Guide Build a Mobile Application as a museum guide, the device scans the QR codes on the artifacts and gives an interactive detailed explanation using Audio / Text / Video about the museum artifact. using location of the user and the list of previously seen artifacts, the mobile application can suggest / recommend which next artifacts to be seen be the user
7.	**Mini-Project 3:** Smart Mobile Application as a Travel / Route Guide, Scenario - You are visiting an ancient monument. There is no local guide available. The previous users have commented on various locations where artifacts can be seen, photo are uploaded. The smart mobile application will give you directions / recommendations / suggestions on what to see and where, including narratives on the same.
8.	**Mini-Project 4:** Design and build a 'Multifunctional Application' in the Mobile and Pervasive domain. The choice of application is to be determined so as to leverage the capabilities of typical smart devices. These include such characteristics as, • Location awareness and GPS systems • Accelerometers • Messaging • Sensor detection capability • Microphone and Camera • Media Player • Touch screen • Mapping Technology • Mobile Web Services
	410244(D): Data Mining and Warehousing
1.	For an organization of your choice, choose a set of business processes. Design star / snow flake schemas for analyzing these processes. Create a fact constellation schema by combining them. Extract data from different data sources, apply suitable transformations and load into destination tables using an ETL tool. **For Example:** Business Origination: Sales, Order, Marketing Process.
2.	Consider a suitable dataset. For clustering of data instances in different groups, apply different clustering techniques (minimum 2). Visualize the clusters using suitable tool.
3.	Apply a-priori algorithm to find frequently occurring items from given data and generate strong association rules using support and confidence thresholds. **For Example:** Market Basket Analysis
4.	Consider a suitable text dataset. Remove stop words, apply stemming and feature selection techniques to represent documents as vectors. Classify documents and evaluate precision, recall.
5.	**Mini project on classification:** Consider a labeled dataset belonging to an application domain. Apply suitable data

Returns from Investment Opportunities								
Amount Invested ($10 million)	*Opportunity*							
	1	2	3	4	5	6	7	8
0	0	0	0	0	0	0	0	0
3	6.5	3.9	3.3	4.8	3.9	6.8	4.6	2.8
4	6.8	4.5	3.8	5.5	3.9	6.8	4.6	2.8

1.	Design simple GUI application with activity and intents e.g. Design an android Application for Phone Call or Calculator
2.	Design an android application for media player.
3.	Design an android Application for SMS Manager
4.	Design an android Application using Google Map To Trace The Location of Device
5.	Design an android Application for Frame Animation
6.	**Mini-Project 1:** Design mobile app to perform the task of creating the splash screen for the application using timer, camera options and integrate Google map API on the first page of the application. Make sure map has following features: • Zoom and View change • Navigation to specific locations • Marker and getting location with touch • Monitoring of location
7.	**Mini-Project 2:** Create an app to add of a product to SQLite database and make sure to add following features • SMS messaging and email provision • Bluetooth options • Accessing Web services • Asynchronous remote method call • Use Alert box for user notification
8.	**Mini-Project 3:** Create the module for collecting cellular mobile network performance parameters using telephony API Manager • Nearest Base Station • Signal Strengths • SIM Module Details • Mobility Management Information
9.	**Mini-Project 4:** Create an application for Bank using spinner, intent • Form 1: Create a new account for customer, Form 2: Deposit money in customer account. Link both forms, after completing of first form the user should be directed to the second form. Provide different menu options
10.	**Mini-Project 5:** Create the module for payment of fees for College by demonstrating the following methods. • Fees Method()- for calculation of fees, Use customized Toast for successful payment of fees, Implement an alarm in case someone misses out on the fee submission deadline • Demonstrate the online payment gateway.