

GUJARAT TECHNOLOGICAL UNIVERSITY

Subject Name: Wireless Programming and Applications Development (Core III)
Subject Code: 3725301

Semester II

Type of course: ME - Computer Engineering (Wireless And Mobile Computing)

Prerequisite: Fundamental concepts of object oriented programming

Rationale: NA

Teaching and Examination Scheme:

Teaching Scheme			Credits C	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
				ESE (E)	PA (M)	ESE (V)	PA (I)	
3	2#	0	4	70	30	30	20	150

L- Lectures; T- Tutorial/Teacher Guided Student Activity; P- Practical; C- Credit; ESE- End Semester Examination; PA- Progressive Assessment;

Content:

Sr. No.	Content	Total Hrs	% Weightage
1	J2ME Architecture, the CLDC and the KVM,	6	10
2	Tools and Development Process Classification of CLDC Target Devices, CLDC Collections API,	6	10
3	CLDC Streams Model MIDlets, MIDlet Lifecycle, MIDP Programming, MIDP Event Architecture High-Level Event Handling,	6	10
4	Low- Level Event Handling, the CLDC Streams Model The CLDC Networking Package, the MIDP Implementation, Introduction to WAP,	7	20
5	WML Script and XHTML Introduction to Multimedia Messaging Services (MMS)	7	20

Text Book:

The Complete Reference Java2ME by James Keogh / TMH

References Books:

1. Mobile Phone Programming Using Java ME (J2ME) by Sourabh Jain/BPB
2. Beginning Java Me Platform by Ray Rischpater / DreamTech

Course Outcome:

On completion of this Subject, students will have an understanding of

1. The WPAD (J2ME) architecture is the cornerstone of JAVA - enabling the combination of voice communications, wireless Internet access and computing functionality.
2. This subject is designed to help developers understand the J2ME platform and learn how to develop and deliver those vital products that plug-in to the comms architecture. Services built around this architecture will drive the 3G market.
3. The knowledge and application skills to design and implement a J2ME application.

List of Experiments: (with Open Ended Problems)

1. Create an MIDP application which examine, that a phone number, which a user has entered is in the given format.
* Area code should be one of the following: 040, 041, 050, 0400, 044
* There should 6-8 numbers in telephone number (+ area code)
2. Create a slide show which has three slides, which includes pictures as PNG format (res). Program should change to the new slide other 5 seconds. Use Threads
3. Create a MIDP application, which show to the user 5-10 quiz questions. All questions have 4 possible options and one right option exactly. Application counts and shows to the user how many right answers were right and shows them to user(You can have multiple levels of the application).
4. Using File Connection, display the list of roots available on the phone. Select one of the root folders and display the files that exist. On selection display the contents of the file(Files can be txt and Images).
5. An interactive application to increase/Decrease the FONT Size (Similar to the color example) using arrow keys.
6. Design a form asking for the following things(First and Last Name, DOB(Use Calender widget),get the image from the res folder and store it in the database.
7. Design a midlet suit showing the use of Alert,List and TextBox
8. Using pointer Pressed () method design an application to draw random figures on the screen.
9. Create a MIDP application, where the user can enter player name and points. The program saves the information to the record using RMS at MIDP device. Program should also print out the top 10 player list to the end user
10. Create a shopping cart kind of application

Major Equipment's:

Nokia s60 java enabled

List of Open Source Software/learning website:

JDK,
NetBeans/eclipse.

Review Presentation (RP): The concerned faculty member shall provide the list of peer reviewed Journals and Tier-I and Tier-II Conferences relating to the subject (or relating to the area of thesis for seminar) to the students in the beginning of the semester. The same list will be uploaded on GTU website during the first

two weeks of the start of the semester. Every student or a group of students shall critically study 2 papers, integrate the details and make presentation in the last two weeks of the semester. The GTU marks entry portal will allow entry of marks only after uploading of the best 3 presentations. A unique id number will be generated only after uploading the presentations. Thereafter the entry of marks will be allowed. The best 3 presentations of each college will be uploaded on GTU website