CMR INSTITUTE
OF TECHNOLOGY

Session wise – Course Plan

CMRIT

Department of Computer Science and Engineering

SEMESTER : V11 B   NAME OF THE FACULTY : Mr.Kiran Babu T S
BRANCH : CSE   DATE OF COMMENCEMENT : 17th Aug 2017
SUBJECT : Object Oriented Modeling and Design   DATE OF CLOSING : 16th Nov 2017
SUBJECT CODE : 10CS71   CLASS STRENGTH :70
NO OF HRS/WK : 5   TOTAL HRS : 52

Session No	Chapter no (No of hrs planed for the chapter)	Date	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter
1.	1/1	17.08.17	**UNIT – 1 Introduction, Modeling Concepts, class Modeling:**	PPT, Board, chalk, duster	
2.	2/1	18.08.17	What is Object Orientation? What is OO development?	"	
3.	3/1	19.08.17	OO themes, Evidence for usefulness of OO development, OO modeling history.	"	
4.	4/1	21.08.17	**Modeling as Design Technique:** Modeling; abstraction; The three models. Class Modeling.	"	ASSIGNMENT-1
5.	5/1	22.08.17	**Class Modeling:** Object and class concepts.	"	Spot Quiz/ Concept Test
6.	6/1	24.08.17	Link and associations concepts,	"	Spot Quiz/ Concept Test
7.	7/1	28.08.17	Generalization and inheritance, A sample class model.	"	
8.	8/1	29.08.17	Navigation of class models; Practical tips.	"	Concept Test
9.	9/1	30.08.17	Revision , Solving Exercise problems	"	
10.	1/2	31.08.17	**Unit-2:Advanced Class Modeling, State Modeling:** Advanced object and class concepts: Association ends; N-ary associations,	"	
11.	2/2	04.09.17	Aggregation: (Aggregation Vs	"	

			association Vs Composition),Propagation of operation		
12.	3/2	05.09.17	Abstract classes: Multiple inheritance.	"	
13.	4/2	06.09.17	Metadata, Reification, Constraints, Derived data, Packages; Practical tips.		
14.	5/2	07.09.17	**State Modeling:** Events, States, Transitions and Conditions.	"	ASSIGNMENT-2
15.	6/2	08.09.17	State diagrams. Examples	"	
16.	7/2	11.09.17	State diagram behavior; Practical tips.	"	
17.	8/2	12.09.17	Revision , Solving Exercise problems	"	
18.	1/3	13.09.17	**Unit-3: Advanced State Modeling, Interaction Modeling**: **Advanced State Modeling:** Nested state diagrams, Nested states, Signal generalization.	"	
19.	2/3	14.09.17	Concurrency	"	
20.	3/3	15.09.17	A sample state model, Relation of class activity models and state models, Practical tips.	"	
21.	4/3	23.09.17	**Interaction Modeling:** Use case models, Use case	"	ASSIGNMENT-3
22.	5/3	25.09.17	Use case diagrams. Examples	"	
23.	6/3	26.09.17	Sequence models. Examples	"	
24.	7/3	27.09.17	Activity Models; Special constructs for.	"	
25.	1/5	28.09.17	**Unit-5:**Application Analysis, System Design: Application Analysis: Application interaction model.	"	
26.	2/5	04.10.17	Application class model.	"	
27.	3/5	06.10.17	Application state model , Adding operations.	"	
28.	4/5	07.10.17	Overview of system design: Estimating performance, Making a reuse plan;	"	
29.	5/5	09.10.17	Breaking a system in to sub-systems, Identifying concurrency.	"	
30.	6/5	10.10.17	Allocation of sub-systems; Management of data storage, Handling global resources.	"	ASSIGNMENT-4
31.	7/5	12.10.17	Choosing a software control strategy, Handling boundary conditions, Setting the trade-off	"	

			priorities.		
32.	8/5	13.10.17	Common architectural styles, Architecture of the ATM system as the example.	"	
33.	1/6	14.10.17	**Unit-6:Class Design, Implementation Modeling, Legacy Systems: Class Design:** Overview of class design, Bridging the gap, Realizing use cases.	"	
34.	2/6	16.10.17	Designing algorithms, Recurring downwards. Refactoring, Design optimization.	"	
35.	3/6	17.10.17	Reification of behavior, Adjustment of inheritance, Organizing a class design ,ATM example.	"	
36.	4/6	24.10.17	**implementation Modeling:** Overview of implementation; Fine-tuning classes, Generalizations, Realizing ,Testing	"	
37.	5/6	25.10.17	**Legacy Systems:** Reverse engineering; Building the class models	"	ASSIGNMENT-5
38.	6/6	26.10.17	Building the interaction model; Building the state model; Reverse engineering tips; Wrapping; Maintenance. Revision	"	
39.	1/7	27.10.17	**Unit-7: Design Patterns – 1:** What is a pattern and what makes a pattern? Pattern categories.	"	
40.	2/7	28.10.17	Relationships between patterns, Pattern description.	"	
41.	3/7	31.10.17	Patterns and software Architecture.	"	
42.	4/7	02.11.17	Forwarder-Receiver.	"	
43.	5/7	03.11.17	Client-Dispatcher-Server	"	
44.	6/7	04.11.17	Publisher-Subscriber	"	ASSIGNMENT-6
45.	1/8	09.11.17	**Unit-8: Design Patterns – 2, Idioms: Management Patterns:** Command processor,	"	
46.	2/8	13.11.17	Command Processor (Contd)	"	
47.	3/8	13.11.17	View Handler	"	ASSIGNMENT-7
48.	4/8	13.11.17	Idioms: Introduction, What can idioms provides? Idioms and style.	"	
49.	5/8	14.11.17	Where to find idioms, Counted Pointer example.		
50.	1/4	14.11.17	**Unit 4 : Process Overview, System Conception,** Domain	"	ASSIGNMENT-8

			Analysis Process Overview: Development stages, Development life cycle		
51.	2/4	15.11.17	System Conception: Devising a system concept; Elaborating a concept; Preparing a problem statement.	"	
52.	3/4	15.11.17	Domain Analysis: Overview of analysis	"	
53.	4/4	16.11.17	Domain class model, state model	"	
54.	5/4	16.11.17	Domain interaction model, Iterating the analysis	"	

Syllabus for Internal Assessment Tests (IAT)[*]

Sessional #	Syllabus
T1	Class # 01 – 20
T2	Class # 21 – 44
T3	Class # 45 – 54

*: See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text Book	TB1	Leland.L.Beck: System Software,	3rd Edition, Pearson Education, 1997.	978-81-317-6460-2
Text Book	TB2	John.R.Levine, Tony Mason and Doug Brown: Lex and Yacc,	O'Reilly, SPD, 1998.	1565920007, 9781565920002
References	RB1	D.M.Dhamdhere: System Programming and Operating Systems	2ndEdition, Tata McGraw - Hill, 1999.	1449335942

**CMR INSTITUTE
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Session wise – Course Plan

Subject Code: 10CS72   **Subject Name: EMBEDDED COMPUTING SYSTEMS**

SEMESTER	: VIIA/B	**NAME OF THE FACULTY**	: Dr. Prem Kumar Ramesh
BRANCH	: CSE	**DATE OF COMMENCEMENT**	:17/08/2017
SUBJECT	: ECS	**DATE OF CLOSING**	: 16/11/2017
SUBJECT CODE	: 10CS72	**CLASS STRENGTH**	: A: 61/B: 60
NO OF HRS/WK	: 6	**TOTAL HRS**	: 58

Unit- #hrs planned	DATE	DAY	Topics planned for the session	Teaching Aids	Assignments/ Tests	Topics covered as per plan
1-1	17-08-2017	3	**UNIT 1:** EMBEDDED COMPUTING Introduction and guided tour of the course	Black Board & Chalk		
1-2	18-08-2017	4	Complex Systems and Microprocessors	"		
1-3	19-08-2017	5	Embedded Systems Design Process	"		
	20-08-2017		Sunday			
1-4	21-08-2017	6	Formalism for System design	"		
1-5	22-08-2017	1	Formalism for System design(contd.)	"	Assignment 1 out	
1-6	23-08-2017	2	Design Example: Model Train Controller	Black Board & Chalk / PPT		
1-7	24-08-2017	3	Seminar/Revision Session on unit 1	"		
	25-08-2017		Varasiddhi Vinayak Varatha			
	26-08-2017		Saturday			
	27-08-2017		Sunday			
2-1	28-08-2017	4	**UNIT 2:**Instruction Sets, CPUs Introduction, Preliminaries	Black Board & Chalk		
2-2	29-08-2017	5	ARM Processor	Black Board & Chalk / PPT + Demo		
2-3	30-08-2017	6	Programming Input and Output	"	Assignment 1 due	
2-4	31-08-2017	1	Supervisor mode, Exceptions, Traps, Coprocessors	Black Board & Chalk	Assignment 2 out	
2-5	01-09-2017	2	Memory Systems Mechanisms	"		
	02-09-2017		Bakrid			
	03-09-2017		Sunday			

2-6	04-09-2017	3	CPU Performance, CPU Power Consumption	"		
2-7	05-09-2017	4	Design Example: Data Compressor	Black Board & Chalk / PPT		
2-8	06-09-2017	5	Seminar/Revision Session on unit 2	"		
3-1	07-09-2017	6	**UNIT 3:**Bus-Based Computer Systems, Introduction	Black Board & Chalk	Assignment 2 due	
3-2	08-09-2017	1	CPU Bus	"	Assignment 3 out	
3-3	09-09-2017	2	Memory Devices	"		
	10-09-2017		Sunday			
3-4	11-09-2017	3	I/O devices	"		
3-5	12-09-2017	4	Component Interfacing, Designing with Microprocessor	"		
3-6	13-09-2017	5	Development and Debugging	"		
3-7	14-09-2017	6	Design Example: Alarm Clock.	Black Board & Chalk / PPT	Assignment 3 due	
3-8	15-09-2017	1	Seminar/Revision Session on unit 3	"		
	16-09-2017		Saturday			
	17-09-2017		Sunday			
	18-09-2017		I A T – 1		Internal Test	
	19-09-2017		MahalayaAmavasye			
	20-09-2017		I A T – 1			
	21-09-2017		I A T – 1			
4-1	22-09-2017	2	**UNIT 4:** Program Design and Analysis, Introduction	Black Board & Chalk		
4-2	23-09-2017	3	Components for embedded programs, Models of programs	"	Assignment 4 out	
	24-09-2017		Sunday			

4-3	25-09-2017	4	Assembly, Linking and Loading, Basic Compilation Techniques	"		
4-4	26-09-2017	5	Basic Compilation Techniques(cont)	"		
4-5	27-09-2017	6	Program optimization	"		
4-6	28-09-2017	1	Program-Level performance analysis	"		
	29-09-2017		Maha Navami, Ayudha Pooja			
	30-09-2017		Vijayadashami			
	01-10-2017		Sunday			
	02-10-2017		Gandhi Jayanthi			
4-7	03-10-2017	2	Software performance optimization	"		
4-8	04-10-2017	3	Program-Level energy and power analysis	"		
	05-10-2017		Maharshi Valmiki Jayanthi			
4-9	06-10-2017	4	Analysis and optimization of program size	"		
4-10	07-10-2017	5	Program validation and testing	Black Board & Chalk / PPT + Demo		
	08-10-2017		Sunday			
4-11	09-10-2017	6	Design Example: Software modem	Black Board & Chalk / PPT	Assignment 4 due	
4-12	10-10-2017	1	Seminar/Revision Session on unit 4	"		
5-1	11-10-2017	2	**Unit-5:** Real Time Operating System (RTOS) Based Design – Introduction	Black Board & Chalk		
5-2	12-10-2017	3	Basics of OS, Kernel, Types of OSs	"		
5-3	13-10-2017	4	Tasks, processes, Threads	Black Board & Chalk / PPT	Assignment 5 out	
5-4	14-10-2017	5	Multitasking and Multiprocessing	Black Board &		

				Chalk		
	15-10-2017		Sunday			
5-5	16-10-2017	6	Context switching, Scheduling Policies	"		
5-6	17-10-2017	1	Task Scheduling	"		
	18-10-2017		Naraka Chaturdashi			
	19-10-2017		Deepavali			
	20-10-2017		Balipadyami Deepavali			
	21-10-2017		Saturday			
	22-10-2017		Sunday			
5-7	23-10-2017	2	Task Communication, Task Synchronization	"	Assignment 5 due	
5-8	24-10-2017	3	Seminar/Revision Session on unit 5	Black Board & Chalk / PPT/ Role play		
6-1	25-10-2017	4	**Unit 6:** RTOS-Based Design, Introduction, Inter process Communication mechanisms	Black Board & Chalk	Assignment 6 out	
6-2	26-10-2017	5	Evaluating OS performance, Choice of RTOS, Power Optimization	"		
6-3	27-10-2017	6	Design Example: Telephone Answering machine	Black Board & Chalk / PPT		
6-4	28-10-2017	1	Seminar/Revision Session on unit 6	Black Board & Chalk / PPT/ Role play		
	29-10-2017		Sunday			
7-1	30-10-2017	2	**Unit 7:** Distributed Embedded Systems, Introduction, Distributed Network Architectures	Black Board & Chalk	Assignment 6 due Assignment 7 out	
7-2	31-10-2017	3	Networks for Embedded Systems: I2C Bus, CAN Bus, SHARC Link Ports	"		
	01-11-		Kannada Rajyothsava			

	2017					
7-3	02-11-2017	4	Ethernet, Myrinet, Internet, Network Based Design.	"		
7-4	03-11-2017	5	Design Example: Elevator Controller	Black Board & Chalk / PPT	Assignment 7 due	
7-5	04-11-2017	6	Seminar/Revision Session on unit 7	Black Board & Chalk / PPT		
	05-11-2017		Sunday			
	06-11-2017		I A T – 2		Internal Test	
	07-11-2017		I A T – 2			
	08-11-2017		I A T – 2			
8-1	09-11-2017	1	**Unit 8:** Embedded Systems Development Environment, Introduction, The Integrated Development Environment	Black Board & Chalk/ Demo	Assignment 8 out	
8-2	10-11-2017	2	Types of File generated on Cross Compilation, Disassembler /Decompiler	Black Board & Chalk		
	11-11-2017		Saturday			
	12-11-2017		Sunday			
8-3	13-11-2017	3	Simulators and Emulators	Black Board & Chalk/ Demo		
8-4	14-11-2017	4	Debugging, Target Hardware Debugging	"		
8-5	15-11-2017	5	Target Hardware Debugging(contd.)	"		
8-6	16-11-2017	6	Seminar/Revision Session on unit 8	Black Board & Chalk / PPT	Assignment 8 due	
	17-11-2017		Improvement Test			
	18-11-2017		Improvement Test			
	19-11-2017		Sunday			
	20-11-		Improvement Test	Black		

	2017			Board & Chalk / PPT		
	21-11-2017	Revision on Old QP and QB Discussion		Black Board & Chalk / PPT		
	22-11-2017	LAB Internal				
	23-11-2017	LAB Internal				
	24-11-2017	LAB Internal				
	25-11-2017	LAB Internal				

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██ Internal Test (No class)
██ Holiday (No class)

Syllabus for Internal Assessment Tests (IAT)*

Sessional #	Syllabus (Unit-Session)
T1	1-1 to 3-8
T2	4-1 to 6-4
T3	7-1 to 8-6

*: As per the calendar of events.

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text Book	TB1	Wayne Wolf: Computers as Components, Principles of Embedded Computing Systems Design	2nd Edition, Elsevier, 2008	ISBN 978-0-12-374397-8
Text Book	TB2	Shibu K V: Introduction to Embedded Systems	Tata McGraw Hill, 2009	ISBN 10: 0070678790 ISBN 13: 9780070678798
References	RB1	James K. Peckol: Embedded Systems, A contemporary Design Tool	Wiley India, 2008	ISBN: 8126524561, 9788126524563
References	RB2	Tammy Neorgaard: Embedded Systems Architecture	Elsevier, 2005	ISBN: 9780123821966, 9780123821973

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Session wise – Course Plan

Department of Computer Science and Engineering

SEMESTER : VII -A	NAME OF THE FACULTY : SHERLY NOEL
BRANCH : CSE	DATE OF COMMENCEMENT : 16-08-2017
SUBJECT : Programming the WEB	DATE OF CLOSING : 20-11-2017
SUBJECT CODE : 10CS73	CLASS STRENGTH : 61
NO OF HRS/WK : 5	TOTAL HRS : 54

Session No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1	**1/1**	18/08/2017	Introduction	Chalk & Talk		
2	**2/1**	19/08/2017	**UNIT – 1** :Internet and WWW	,,		
3	**3/1**	21/08/2017	Web Browsers and Web Servers, URLs and MIME	,,	Assignment- I	
4	**4/1**	22/08/2017	HTTP and Security, The Web Programmers Toolbox.	,,		
5	**5/1**	23/08/2017	XHTML: Basic syntax, Standard structure	Hands-on		
6	**6/1**	28/08/2017	Basic text mark-up, Images, Hypertext Links.	,,		
7	**1/2**	28/08/2017	**UNIT – 2** Lists, Tables	Hands-on		
8	**2/2**	29/08/2017	Forms, Frames	,,	Assignment -II	
9	**3/2**	30/08/2017	CSS: Introduction, Levels of style sheets	Chalk & Talk		
10	**4/2**	31/08/2017	Style specification formats, Selector forms	,,		
11	**5/2**	01/09/2017	Property value forms, Font properties	,,		
12	**6/2**	05/09/2017	List properties, Color, Alignment of text	Hands-on		

13	**7/2**	05/09/2017	The box model, Background images, The <span> and<div> tags, Conflict resolution.	Chalk & Talk		
14	**1/3**	06/09/2017	**UNIT – 3 JavaScript** Overview of JavaScript	Chalk & Talk		
15	**2/3**	07/09/2017	Object orientation and JavaScript, Syntactic characteristics, Primitives	''	Assignm ent –III	
16	**3/3**	08/09/2017	Operations, and expressions, Screen output and keyboard input,	Hands-on		
17	**4/3**	09/09/2017	Control statements and Object creation	Chalk & Talk		
18	**5/3**	12/09/2017	modification, Arrays, Functions, Constructors,	,,		
19	**6/3**	12/09/2017	Pattern matching using regular expressions, Errors in scripts, Examples.	,,		
20	**1/4**	13/09/2017	**UNIT–4 JavaScript and HTML Documents, Dynamic Documents with JavaScript** The JavaScript execution environment, The Document Object Model	,,		
21	**2/4**	14/09/2017	Element access in JavaScript, Events and event handling, Handling events from the Body elements,	Hands-on	Assignm ent –IV	
22	**3/4**	15/09/2017	Button elements, Text box and Password elements,	,,		
23	**4/4**	22/09/2017	The DOM2 event model, The navigator object, DOM tree traversal and modification.	Chalk & Talk		
24	**5/4**	25/09/2017	Introduction to dynamic documents, Positioning elements,	Hands-on		
25	**6/4**	25/09/2017	Moving elements, Element visibility,	,,		
26	**7/4**	26/09/2017	Changing colors and fonts, Dynamic content,	,,		
27	**8/4**	27/09/2017	Stacking elements, Locating the mouse cursor,	,,		
28	**9/4**	28/09/2017	Reacting to a mouse click, Slow movement of elements, Dragging and dropping elements.	,,		
29	**1/5**	03/10/2017	**UNIT – 5 XML** Introduction, Syntax	Chalk & Talk		
30	**2/5**	06/10/2017	Document structure, Document type definitions	,,	Assignm ent -V	
31	**3/5**	06/10/2017	Namespaces, XML schemas	,,		

32	**4/5**	07/10/2017	Displaying raw XML documents, Displaying XML documents with CSS	Hands-on		
33	**5/5**	09/10/2017	XSLT style sheets, XML processors	,,		
34	**6/5**	10/10/2017	Web services	Chalk & Talk		
35	**1/6**	11/10/2017	**UNIT – 6 Perl, CGI Programming** Origins and uses of Perl,	,,		
36	**2/6**	13/10/2017	Scalars and their operations, Assignment statements and simple input and output	,,	Assignment -VI	
37	**3/6**	13/10/2017	Control statements, Fundamentals of arrays Hashes, References	,,		
38	**4/6**	14/10/2017	Functions, Pattern matching, File input and output; Examples.	,,		
39	**5/6**	16/10/2017	The Common Gateway Interface; CGI linkage; Query string format;	''		
40	**6/6**	17/10/2017	CGI.pmmodule; A survey example, Cookies	Hands-on		
41	**7/6**	23/10/2017	Database access with Perl and MySQL	,,		
42	**1/7**	25/10/2017	**UNIT – 7 PHP** Origins and uses of PHP, Overview of PHP	Chalk & Talk		
43	**2/7**	25/10/2017	General syntactic characteristics, Primitives	,,	Assignment -VII	
44	**3/7**	26/10/2017	Operations and expressions, Output, Control statements	,,		
45	**4/7**	27/10/2017	Arrays, Functions	,,		
46	**5/7**	28/10/2017	Pattern matching, Form handling	Hands-on		
47	**6/7**	30/09/2017	Files, Cookies, Session tracking	''		
48	**7/7**	02/11/2017	Database access with PHP and MySQL	,,		
49	**1/8**	02/11/2017	**UNIT – 8 Ruby, Rails** Origins and uses of Ruby	Chalk & Talk		
50	**2/8**	03/11/2017	Scalar types and their operations, Simple input and output	,,	Assignment -VIII	
51	**3/8**	04/11/2017	Control statements, Arrays, Hashes	,,		
52	**4/8**	09/11/2017	Methods, Classes	Hands-on		
53	**5/8**	10/11/2017	Code blocks and iterators Pattern matching	,,		

54	**6/8**	14/11/2017	Overview of Rails	Chalk & Talk		
55	**7/8**	15/11/2017	Document requests, Processing forms	,,		
56	**8/8**	16/11/2017	Rails applications With Databases, Layouts.	,,		

Syllabus for Internal Assessment Tests (IAT)[*]

Sessional #	Syllabus
T1	Class # 01 - 19
T2	Class # 20 – 54
T3	

*: See calendar of events for the schedules of IATs.

Literature:

| Book Type | Code | Author & Title | Publication information | |
			Edition // Publisher	ISBN #
Text Book	TB1	Robert W. Sebesta: Programming the World Wide Web	4th Edition,Pearson Education, 2009	978-81-317-6458-9
References	RB1	M. Deitel, P.J. Deitel, A. B. Goldberg: Internet & World Wide Web How to Program	4th Edition, Pearson Education, 2004	978-81-317-2522-1
References	RB2	Chris Bates: Web Programming Building Internet Applications	3rdEdition, Wiley India, 2009	978-81-265-1290-4
References	RB3	Xue Bai et al: The web Warrior Guide to Web Programming	Cengage Learning, 2003	978-81-315-0017-0

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Session wise – Course Plan

CMRIT

Department of Computer Science and Engineering

SEMESTER : VII-A	NAME OF THE FACULTY	: Reshma Shet
BRANCH : CSE	DATE OF COMMENCEMENT	: 17/08/2016
SUBJECT : Advanced Computer Architecture	DATE OF CLOSING	: 16/11/2017
SUBJECT CODE: 10CS74	Total CLASS STRENGTH	: 61
NO OF HRS/WK: 6	TOTAL HRS	: 48

Session No	Chapter no (No of hrs planed for the chapter)	Date	Topics planned for the session	Teaching Aids	
1	**1/1**	18/8/17	**Unit 1**: Prerequisites, Introduction , Basics of Computer Architecture, Classes of Computers	Chalk and talk	
2	**2/1**	19/8/17	Defining a computer architecture	"	
3	**3/1**	21/8/17	Trends in Technology. Trends in Power. Problem Solving	"	
4	**4/1**	22/8/17	Trends in cost. Problem Solving, Dependability and problem solving	"	Assignment No 1
5	**5/1**	23/8/17	Measuring, Reporting and Summarizing Performance. Quantitative Principles of Computer Design.	"	
6	**6/1**	23/8/17	Amdahl's law and problem solving, Processor Performance equation	"	
7	**7/1**	28/8/17	Revision of Unit 1	"	
8	**1/2**	29/8/17	**Unit 2:** Introduction to pipelining	"	
9	**2/2**	30/8/17	Pipeline Hazards	PPT for Diagrams	
10	**3/2**	31/8/17	Implementation of Pipelining	PPT for Diagrams	Assignment No 2
11	**4/2**	01/9/17	What makes pipeline hard to implement	Chalk and talk	

12	**5/2**	01/9/17	Revision of Unit 2	"	
13	**1/3**	05/9/17	**Unit 3 :** ILP: Concepts and Challenges	"	Assignment No 3
14	**2/3**	6/9/17	Various Dependences	"	
15	**3/3**	7/9/17	Basic Compiler techniques for exposing ILP	"	
16	**4/3**	8/9/17	Reducing Branch cost with Prediction: Static Branch Prediction, Dynamic Branch Prediction.	"	
17	**5/3**	9/9/17	Dynamic Scheduling Idea	"	
18	**6/3**	9/9/17	Dynamic Scheduling using Tomasulo's algorithm	PPT for diagrams	
19	**7/3**	12/9/17	Hardware based Speculation	PPT for diagrams	
20	**8/3**	13/9/17	Revision of Unit 3	Chalk and Talk	
21	**1/4**	14/9/17	**Unit 4:** Exploiting ILP Using Multiple Issue and Static Scheduling	PPT for diagrams	Assignment No 4
22	**2/4**	15/9/17	Exploiting ILP Using Dynamic Scheduling, Multiple Issue, and Speculation	Chalk and Talk	
23	**3/4**	22/9/17	Advanced Techniques for Instruction Delivery and Speculation	"	
24	**4/4**	22/9/17	Hardware based Speculation	"	
25	**5/4**	25/9/17	Speculation: Implementation Issues and Extensions	"	
26	**6/4**	26/9/17	Speculation: Implementation Issues and Extensions	PPT for diagrams	
27	**7/4**	27/9/17	Intel Pentium 4	Chalk and talk	
28	**1/5**	28/9/17	**Unit 5:** Introduction	"	Assignment No 5
29	**2/5**	3/10/17	Symmetric Shared-Memory Architectures: Multiprocessor Cache Coherence	"	
30	**3/5**	3/10/17	Symmetric Shared-Memory Architectures: Snooping Protocol	"	

31	**4/5**	6/10/17	Performance of Symmetric Shared-Memory Multiprocessors	PPT for diagrams	
32	**5/5**	7/10/17	Performance of Symmetric Shared-Memory Multiprocessors	PPT for diagrams	
33	**6/5**	9/10/17	Distributed Shared Memory and Directory-Based Coherence	Chalk and talk	
34	**7/5**	10/10/17	Distributed Shared Memory and Directory-Based Coherence , An Example Directory Protocol	"	
35	**8/5**	11/10/17	Synchronization: The Basics	"	
36	**9/5**	11/10/17	Models of Memory Consistency: An Introduction	"	
37	**10/5**	13/10/17	**Revision of Unit 5**	"	
38	**1/6**	14/10/17	**Unit 6:** Review of Memory Hierarchy Introduction	"	
39	**2/6**	16/10/17	Four memory hierarchy questions	"	
40	**3/6**	17/10/17	Cache Performance	"	
41	**4/6**	23/10/17	Miss Penalty and Out-of-Order Execution Processors, Six Basic Cache Optimizations	"	
42	**5/6**	23/10/17	Virtual Memory,	"	
43	**6/6**	25/10/17	Six memory hierarchy questions revisited	"	
44	**1/7**	26/10/17	**Unit 7 Introduction**	"	
45	**2/7**	27/10/17	Eleven Advanced Optimizations of Cache Performance	"	
46	**3/7**	28/10/17	Memory Technology and Optimization SRAM, DRAM	"	
47	**4/7**	30/10/17	Improving Memory Performance inside a DRAM Chip	"	
48	**5/7**	30/10/17	Protection: Virtual Memory and Virtual Machines, Protection via Virtual Memory	"	
49	**6/7**	2/11/17	Protection via Virtual Machines	"	

50	**7/7**	3/11/17	Revision	"	
51	**1/8**	4/11/17	**Unit 8:** Introduction , Detecting and Enhancing Loop-Level Parallelism	"	
52	**2/8**	9/11/17	Detecting and Enhancing Loop-Level Parallelism	"	
53	**4/8**	10/11/17	Scheduling and Structuring the code for Parallelism	"	
54	**5/8**	10/11/17	Hardware Support for Exposing Parallelism: Predicated Instructions	"	
55	**6/8**	14/11/17	Hardware Support for Compiler Speculation	"	
56	**7/8**	15/11/17	The Intel IA-64 Instruction Set Architecture, The Itanium 2 Processor	' '	
57	**8/8**	16/11/17	Revision of Unit 8	' '	

Syllabus for Internal Assessment Tests (IAT)[*]

Sessional #	Syllabus
T1	Class # 1-20
T2	Class # 21-37
T3	Class # 38-57

*: See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	**ISBN #**
Text Book	TB1	John L. Hennessay and David A. Patterson: Computer Architecture: A Quantitative Approach	4th Edition, Elsevier 2007	ISBN 13: 978-0-12-370490-0
Text Book	TB2	Kai Hwang, Advanced Computer Architecture Parallelism, Scalability, Programmability	2nd Edition, Tata Mc Graw Hill	ISBN-13:978-0-07-053070-6

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Session wise – Course Plan

Department of Computer Science & Engineering

SEMESTER   : VIIth Sem (Sec-A)
BRANCH   : CSE
SUBJECT   : Java & J2EE
SUBJECT CODE : 10CS753 (Elective)
NO OF HRS/WK : 4

NAME OF THE FACULTY   : Dr. P. N. Singh
DATE OF COMMENCEMENT : 16-08-2017
DATE OF CLOSING   : 16-11-2017
CLASS STRENGTH   : 60
TOTAL HRS   : 51

Course Objective:
This elective course will enable students:
- To understand features of Java & Principle of object oriented programming language.
- To use inheritance, exceptions, applets & threading in Java
- To explain Database connectivity, Java server Pages, Java beans & Java Archive files.

Sess ion No	Topic Nos. / Module no	DATE	Topics planned for the session	Teaching Aids	Assignmen ts/ Tests planned for the chapter	Topics covered As per plan
1		16-08-2017	**Induction Class, Course overview**	Chalk & Talk		
2	UNIT-1	17-08-2017	**Introduction to Java:** Java & Java Applications, One sample program	,,		
3		19-08-2017	Java Development Kit(JDK); Java is interpreted, Compiling & running a Java program	PPT slides		
4		19-08-2017	Byte code, Java Virtual Machine, Object-oriented programming; Simple Java programs.	Chalk & Talk		
5		21-08-2017	Data types and other tokens: Boolean variables, int, long, char, operators, Expression, white spaces, literals, assigning values;	,,		
6		23-08-2017	Creating and destroying objects; Access specifiers. Example program	Chalk & Talk		
7		24-08-2017	Logical expression; Type casting; Strings Control Statements: Selection statements, iteration statements, Jump Statements.	,,		
8		29-08-2017	Tutorial	PPT slides		

9	UNIT-2	29-08-2017	**CLASSES, INHERITANCE, EXCEPTIONS, APPLETS:** Classes: Classes in Java; Declaring a class; Class name; Constructors; Creating instances of class;	Chalk & Talk		
10		30-08-2017	Super class, Inner classes. Inheritance: Simple, multiple, and multilevel inheritance; Overriding, Overloading	Chalk & Talk		
11		01-09-2017	Exception handling: Exception handling in Java.	,,		
12		04-09-2017	The Applet Class: Two types of Applets; Applet basics; Applet Architecture; An Applet skeleton; Simple Applet display methods;	PPT slides		
13		06-09-2017	Requesting repainting; Using the Status Window; The HTML APPLET tag; Passing parameters to Applets;	Chalk & Talk		
14		06-09-2017	getDocumentbase() and getCodebase(); ApletContext and showDocument();	,,		
15		07-09-2017	The AudioClip Interface; The AppletStub Interface; Output to the Console.	Chalk & Talk		
16		09-09-2017	**Tutorial**	,,		
17	UNIT-3	11-09-2017	**MULTI THREADED PROGRAMMING, EVENT HANDLING:** Multi Threaded Programming: What are threads? How to make the classes threadable; Extending threads;	PPT slides		
18		13-09-2017	Implementing runnable; Synchronization; Changing state of the thread;	Chalk & Talk		
19		13-09-2017	Bounded buffer problems, read-write problem, producer-consumer problems.	,,		
20		14-09-2017	Event Handling: Two event handling mechanisms; The delegation event model; Event classes; Sources of events;	Chalk & Talk		
21		22-09-2017	Event listener interfaces; Using the delegation event model;	,,		
22		23-09-2017	Adapter classes; Inner classes.	PPT slides		
23	UNIT-4	26-09-2017	**SWINGS:** The origins of Swing; Two key Swing features; Components and Containers; The Swing Packages;	Chalk & Talk		
24		26-09-2017	A simple Swing Application; Create a Swing Applet; Jlabel and ImageIcon; JTextField;	,,		
25		27-09-2017	The Swing Buttons; JTabbedpane; JScrollPane; JList; JComboBox; JTable.	Chalk & Talk	Assignment-1	
26		03-10-2017	Revision			

27		04-10-2017	Discussion on Model/Univ Questions			
28		07-10-2017	Demo of program executions			
29		07-10-2017	Tutorial			
30	UNIT-5	09-10-2017	**JAVA 2 ENTERPRISE EDITION OVERVIEW: DATABASE ACCESS:** Overview of J2EE and J2SE. The Concept of JDBC; JDBC Driver Types; JDBC Packages;	,,		
31		10-10-2017	A Brief Overview of the JDBC process;	PPT slides		
32		11-10-2017	Database Connection; Associating the JDBC/ODBC Bridge with the Database; Statement Objects;	Chalk & Talk		
33		12-10-2017	ResultSet; Transaction Processing; Metadata,	,,		
34		14-10-2017	Data types; Exceptions	Chalk & Talk		
35		14-10-2017	Tutorial	,,		
36	UNIT-6	16-10-2017	**SERVLETS:** Background; The Life Cycle of a Servlet; Using Tomcat for Servlet Development; A simple Servlet;	PPT slides		
37		23-10-2017	The Servlet API; The Javax.servlet Package;	Chalk & Talk		
38		24-10-2017	Reading Servlet Parameter; The Javax.servlet.http package;	,,		
39		26-10-2017	Handling HTTP Requests and Responses; Using Cookies; Session Tracking.	PPT slides		
40		26-10-2017	Tutorial	Chalk & Talk		
41	UNIT-7	27-10-2017	**JSP, RMI:** Java Server Pages (JSP): JSP, JSP Tags, Tomcat, Request String,	PPT slides		
42		30-10-2017	User Sessions, Cookies, Session Objects.	PPT slides		
43		31-10-2017	Java Remote Method Invocation: Remote Method Invocation concept;	Chalk & Talk		
44		03-11-2017	Server side, Client side. 6	PPT slides		
45	UNIT-8	03-11-2017	**ENTERPRISE JAVA BEANS:** Introduction	PPT slides		
46		04-11-2017	Deployment Descriptors;	Chalk & Talk		

Sessi on No		DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter
47		10-11-2017	Session Java Bean, Entity Java Bean;	PPT slides	
48		13-11-2017	Message-Driven Bean;	PPT slides	
49		15-11-2017	The JAR File.	Chalk & Talk	
50		15-11-2017	Tutorial & Model Questions-Answers	PPT slides	Assignme nt-2
51		16-11-2017	Tutorial & Model Questions-Answers	Chalk & Talk	

Reference/Literature:

Book Type	Code	Author/Title	Publication information	
			Edition/Publisher/Year	ISBN #
Text Book	T1	Herbert Schildt/Java - The Complete Reference	7th Edition/Tata McGraw Hill/2007.	
Text Book	T2	Jim Keogh/J2EE - The Complete Reference	Tata McGraw Hill, 2007.	
References	R1	Y. Daniel Liang/Introduction to JAVA Programming	6th Edition/Pearson Education/2007.	
References	R2	Stephanie Bodoff et al/The J2EE Tutorial	2nd Edition/ Pearson Education/2004.	

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Session wise – Course Plan

Department of Computer Science and Engineering

SEMESTER : VII –A, B & C   NAME OF THE FACULTY : Shivaraj Veerappa Banakar
BRANCH   : CSE   DATE OF COMMENCEMENT : 14/08/2017
SUBJECT   : C# with .NET   DATE OF CLOSING   : 16/11/2017
SUBJECT CODE: 10CS761   CLASS STRENGTH   : 64
NO OF HRS/WK : 5   TOTAL HRS   : 54

Sessi on No	Chapter no (No of hrs planed for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter

1	**1/1**	17/8	**The Philosophy of .NET**: Understanding the Previous State of Affairs, The.NET Solution	Chalk & Talk	
2	**2/1**	18/8	The Building Block of the .NET Platform (CLR,CTS, and CLS)	,,	
3	**3/1**	21/8	The Role of the .NET Base Class Libraries, What C# Brings to the Table, An Overview of .NET Binaries (aka Assemblies), the Role of the Common Intermediate Language, The Role of .NET Type Metadata, The Role of the assembly Manifest	,,	
4	**4/1**	22/8	Compiling CIL to Platform – Specific Instructions, Understanding the Common Type System, Intrinsic CTS Data Types	,,	
5	**5/1**	23/8	Understanding the Common Languages Specification, Understanding the Common Language Runtime	,,	
6	**6/1**	24/8	A tour of the .NET Namespaces, Increasing Your Namespace Nomenclature, Deploying the .NET Runtime.	,,	
7	**1/2**	28/8	Building C# Applications: The Role of the Command Line Complier (csc.exe)	''	
8	**2/2**	30/8	Building C# Application using csc.exe Working with csc.exe Response Files	,,	
9	**3/2**	31/8	Generating Bug Reports, Remaining g C# Complier Options	,,	
10	**4/2**	1/9	The Command Line Debugger (cordbg.exe) Using the, Visual studio .NET IDE, Other Key Aspects of the VS.NET IDE	,,	Assignment- I
11	**5/2**	4/9	C# "Preprocessor:" Directives	,,	
12	**6/2**	5/9	An Interesting Aside: The System. Environment Class.	,,	
13	**1/3**	7/9	C# Language Fundamentals: The Anatomy of Basic C# Class, Creating objects: Constructor Basics	,,	
14	**2/3**	8/9	The Composition of a C# Application, Default assignment and Variable Scope, The C# Member Initialization Syntax, Basic Input and Output with the	,,	

			Console Class		
15	**3/3**	9/9	Understanding Value Types and Reference Types Converting Between Value Types and Reference Types: Boxing and Unboxing, Defining Program Constants	' '	
16	**4/3**	11/9	Understanding Value Types and Reference Types Converting Between Value Types and Reference Types: Boxing and Unboxing, Defining Program Constants	,,	
17	**5/3**	12/9	The Master Node: System, Object, The System Data Types (and C# Aliases) C# Iteration Constructs, C# Controls Flow Constructs	,,	
18	**6/3**	14/9	The Complete Set of C# Operators, Defining Custom Class Methods	,,	
19	**7/3**	15/9	Understating Static Methods, Methods Parameter Modifies, Array Manipulation in C#, String Manipulation in C#,	,,	
20	**8/3**	22/9	C# Enumerations, Defining Structures in C#, Defining Custom Namespaces.	,,	Assignment – II
21	**1/4**	23/9	Object- Oriented Programming with C# introduction	,,	
22	**2/4**	25/9	Recapping the Pillars of OOP, The First Pillars: C#'s Encapsulation Services	,,	
23	**3/4**	27/9	Pseudo- Encapsulation: Creating Read-Only Fields	' '	
24	**4/4**	28/9	The Second Pillar: C#'s Inheritance Supports, keeping Family Secrets: The "Protected" Keyword, Nested Type Definitions	,,	
25	**5/4**	3/10	The Third Pillar: C #'s Polymorphic Support, Casting Between	,,	
26	**6/4**	4/10	Forms Defining of the C# Class, Definition the "Default Public Interface" of a Type	,,	
27	**1/5**	6/10	Exceptions and Object Lifetime: Ode to Errors, Bugs, and Exceptions	,,	
28	**2/5**	9/10	The Role of .NET Exception Handing, the System. Exception Base Class, Throwing a Generic Exception, Catching Exception	,,	

29	**3/5**	10/10	CLR System – Level Exception (System. System Exception), Custom Application Level Exception (System. System Exception)	,,	
30	**4/5**	11/10	Handling Multiple Exception, The Family Block, the Last Chance Exception Dynamically Identifying Application – and System Level Exception	,,	Assignment – III
31	**5/5**	12/10	Debugging System Exception Using VS. NET, Understanding Object Lifetime, the CIT of "new', The Basics of Garbage Collection	,,	
32	**6/5**	13/10	Finalization a Type, The Finalization Process, Building an Ad Hoc Destruction Method	''	
33	**1/6**	16/10	Garbage Collection Optimizations, The System. GC Type.	,,	
34	**2/6**	17/10	Interfaces and Collections: Defining Interfaces Using C# Invoking Interface Members at the object Level, Exercising the Shapes Hierarchy	,,	
35	**3/6**	23/10	, Understanding Explicit Interface Implementation, Interfaces As Polymorphic Agents, Building Interface Hierarchies	,,	
36	**4/6**	24/10	Interfaces Using VS .NET, understanding the IConvertible Interface, Building a Custom Enumerator (IEnumerable and Enumerator)	,,	
37	**5/6**	25/10	Building Cloneable objects (ICloneable)	,,	
38	**6/6**	27/10	Building Comparable Objects (I Comparable)	,,	
39	**7/6**	28/10	Exploring the system. Collections Namespace, Building a Custom Container (Retrofitting the Cars Type)	''	
40	**1/7**	30/10	Callback Interfaces, Delegates, and Events	,,	Assignment - IV
41	**2/7**	31/10	Advanced Techniques: Understanding Callback Interfaces, Understanding the .NET Delegate Type	,,	
42	**3/7**	2/11	Members of System. Multicast Delegate, The Simplest Possible	,,	

			Delegate Example, Building More a Elaborate Delegate Example		
43	**4/7**	4/11	Understanding Asynchronous Delegates, Understanding (and Using)Events.	,,	
44	**5/7**	9/11	A Variation of the Cars Indexer Internal Representation of Type Indexer. Using C# Indexer from VB .NET	,,	
45	**6/7**	10/11	Overloading operators, The Internal Representation of Overloading Operators, interacting with	,,	
46	**7/7**	13/11	Creating Custom Conversion Routines, Defining Implicit Conversion Routines	,,	
47	8/7	14/11	The Internal Representations of Customs Conversion Routines, The Advances Keywords of C#,	''	
48	**1/8**	16/11	Probing for Private Assemblies (The Details), Understanding Shared Assembly, Understanding Shared Names, Building a Shared Assembly, Understanding Delay Signing	,,	
49	**2/8**	Extra	Installing/Removing Shared Assembly, Using a Shared Assembly	,,	
50	**3/8**	Extra	A C#. Client Application, A Visual Basic .NET Client Application, Cross Language Inheritance,	,,	
51	**4/8**	Extra	A Catalog of C# Keywords Building a Custom Indexer	,,	
52	**5/8**	Extra	Exploring the Car Library's, Manifest, Exploring the Car Library's Types,	,,	
53	**6/8**	Extra	Overload Operator from Overloaded- Operator- Challenged Languages	,,	
54	**7/8**	Extra	Building the Multifile Assembly	,,	

Syllabus for Internal Assessment Tests (IAT)[*]

Sessional #	Syllabus
T1	Class # 01 - 25
T2	Class # 25 – 40
T3	Class # 40 – 54

*: See calendar of events for the schedules of IATs.

Literature:

Book Type	Code	Author & Title	Publication information	
			Edition // Publisher	ISBN
Text Book	TB1	Andrew Troelsen: Programming C# with .NET 3.0	Special Edition, Dream tech Press, India, 2007,4 Edition, Wiley India 2009	978-81-8128-682-6
Text Book	TB2	E. Balagurusamy: Programming in C#	2nd Edition, Tata McGraw Hill	9780070067570
Reference	RB1	Tom Archer: Inside	WP Publishers, 2001.	9789350041253
Reference	RB2	Herbert Schildt: C# - The Complete	Tata McGraw Hill, 2004	0070486751