(An Autonomous institution affiliated to VTU, Belgaum)

VII Sem B.E. (CSE) Mid Semester Examinations – II October 2012

CS703 – SOFTWARE ARCHITECTURE

Duration: 1 Hour

Max. Marks: 20

*Note: Answer any **One** full question from **each Unit.***

Unit – I

1. a) Explain the implementation of microkernel architectural pattern. 5

   b) Explain, example with diagram, problem and solution of an interactive application with the help of cooperating agents. 5

2. a) Explain the dynamics of the open implementation meta level architecture. 5

   b) Explain Variants, consequences, known uses and limitations of Broker pattern. 5

Unit – II

3. a) Explain implementation of aggregate objects under design patterns. 5

   b) Explain consequences, known uses and limitations of proxy design pattern. 5

4. a) Explain the problem, solution, structure and dynamics of partitioning work into semantically identical sub tasks. 5

   b) Explain structure and scenario of Whole-Part design pattern. 5

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VII Sem B.E. (CSE) Mid Semester Examinations – II, October 2013

CS703 - SOFTWARE ARCHITECTURE

ation: 1 Hour

Max. Marks: 20

*Note: Answer any **One** full question from **each Unit.***

Unit – I

a) Discuss fault recovery techniques in achieving Availability attribute. 6

b) Explain how to control resource demand for achieving Performance . 4

a) Explain role of different types of agent in PAC application with an example. 6

b) Explain broker pattern with the help of CRC Cards. 4

Unit – II

a) With a neat diagram explain the scenario in which a client sends a request to a local server. In this scenario we describe a synchronous invocation, in which the client blocks until it gets a response from the server. The broker may also support asynchronous invocations, allowing clients to execute further tasks without having to wait for a response. 6

b) Explain benefits and liabilities of PAC pattern. 4

Discuss steps in building Model view controller (MVC) application. 10

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VII Sem B.E. (CSE) Mid Semester Examinations – II, October 2014

CS703 – SOFTWARE ARCHITECTURE

on: 1 Hour

Max. Marks: 20

*Note: Answer any **One** full question from **each Unit.***

Unit – I

"A developer wishes to change the user interface to make a screen's background color blue. This change will be made to the code at design time. It will take less than three hours to make and test the change and no side effect changes will occur in the behavior." Identify the quality attribute in this scenario and Write a detail description of tactics to achieve this attribute. 10

"Users initiate 1,000 transactions per minute stochastically under normal operations, and these transactions are processed with an average latency of two seconds.".Identify the quality attribute in this scenario and write tactics to achieve this attribute. 10

Unit – II

"Scenario 1 illustrates the behavior when a client sends a request to a local server. In this scenario we describe a synchronous invocation,in which the client blocks until it gets a response from the server. The broker may also support asynchronous invocations, allowing clients to execute further tasks without having to wait for a response". Draw sequence diagram for this scenario with respect to broker pattern and explain the diagram. 10

a) Discuss the different steps involved in implementing MVC application. 5

b) Draw CRC diagram for five participating components in Microkernel. 5

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VII Sem B.E. (CSE) Mid Semester Examinations - II, October 2015

12CS703 - SOFTWARE ARCHITECTURE

Duration: 1 Hour | Max. Marks: 20

*Note: Answer any **One** full question from **each Unit.***

			Marks	BT*
		Unit – I		
1.	a)	Classify security tactics. What are different tactics for resisting attacks?	5	L4 L1
	b)	Discuss the consequences of presentation abstraction control architecture pattern.	5	L2
2.	a)	What is tactics? Explain various tactics used for fault detection.	5	L2
	b)	What is PAC? What are its known uses? Mention its benefits.	5	L1 L2
		Unit – II		
3.	a)	What is microkernel? Mention the implementation steps of the same.	5	L1 L2
	b)	Discuss how the broker system can be used for developing city information system.	5	L3
4.	a)	Explain concrete testability scenario with a suitable illustration.	5	L2
	b)	Elaborate the structure of the broker architecture pattern to structure the distributed software system.	5	L2

BT* Bloom's Taxonomy, L* Level

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VII Sem B.E. (CSE) Mid Semester Examinations - II, October 2017

14CS703 - SOFTWARE ARCHITECTURE

Duration: 1 Hour

Max. Marks: 20

*Note: Answer any **One** full question from **each Unit.***

			Marks	BT*
		Unit – I		
1.	a)	Design and Explain the dynamic behavior of MVC pattern.	6	L*6
	b)	Describe the variants of Broker pattern.	4	L2
2.	a)	Determine the structure and CRC of Adaptable systems.	5	L5
	b)	List and explain the implementation steps for PAC pattern.	5	L4
		Unit – II		
3.	a)	Construct the dynamics for the Master Slave Pattern. Explain the different phases of it.	6	L3
	b)	Describe the different variants of Proxy Pattern.	4	L2
4.	a)	Develop and explain the dynamics for the whole part structure.	6	L3
	b)	What are the consequences and liabilities of Master Slave pattern?	4	L1

BT* Bloom's Taxonomy, L* Level

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VII Sem B.E. (CSE) Mid Semester Examinations - II, October 2016

13CS703 – SOFTWARE ARCHITECTURE

ion: 1 Hour

Max. Marks: 20

*Note: Answer any **One** full question from **each Unit.***

		Marks	BT*
	Unit – I		
a)	What is Broker Architectural Pattern? Discuss any 2 scenarios illustrating the dynamic behavior of Broker system.	7	L*4
b)	Show the structure of MVC pattern using the CRC.	3	L2
a)	Describe the dynamic behavior of Microkernel Pattern.	6	L4
b)	List the participating components of PAC pattern and write the CRC for the same.	4	L1
	Unit – II		
a)	Discuss the behaviour of whole part structure using the scenario of 2D Modelling for CAD system.	6	L4
b)	List the variants of proxy pattern and bring out their relevance.	4	L3
a)	Explain the dynamics of Proxy pattern capturing the runtime scenario.	6	L4
b)	Identify the implementation steps of Master Slave Pattern.	4	L4

BT* Bloom's Taxonomy, L* Level

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