Saveetha School of Engineering
Saveetha Institute of Medical and Technical Sciences, Chennai
Computer Science and Engineering

Subject Code / Nam e: CSA09 / Programming in Java
Course Faculty Nam e:
SESSION PLAN No.2 – Java features and concepts

Date	Session No	Topic	Programs	Timings
22-02-2024	1	Constructors and methods with inheritance (Single and Multilevel Inheritance)	1. Write java code for creating 3 methods called even, odd and prime in parent class and override them from child class. The parent class should print 1 to 20 range in all method, but child print 1 to 30 array range in all methods. And access all the methods using derived class object 2. Override a default constructor, which contains a=10,b=15 in java using parametrized constructor which contains a=20,b=25. Create a method called disp(). And call both the constructors associating it with disp() 3. Java program to create a Base class with a method called 'void area(int a, int b)' which print area of a square. Now override the method from Derived class and make it print area of a rectangle. 4. Write java code to overload a method called 'int sum(int a, int b)' by the 3 ways. a) By increasing and decreasing no. of parameters b) By changing the data types of parameters c) By interchanging the parameters	8.00 AM to 9.00 AM
	2	Abstract classes and Interfaces (Multiple Inheritance)	5. Create an abstract class with 2 abstract methods(total() and average()) and 3 concrete methods(mean(), mode(), median()). Now extend the abstract class from a concrete class and use all the methods in that abstract class 6. Create an interface with 4 methods called add(), sub(), mul() and div(). Then give implementation for all in the implementing class. 7. Create 3 interfaces with 1 method each sum(), avg(), percentage() respectively. Now implement all the 3 interfaces in your class	9.00 AM to 10.00 AM

			8. Create an interface called Tree and extend 2 classes from it called Branch1 and Branch2. Tree should contain methods fruits(), leaves() and flowers(), these methods contain 2,3,4 parameters respectively.	
	3	Final, Static, this and super keywords		10.00 AM to 11.00 AM
			9. Use static keyword in the following levels a) Static variable b) Static method c) Static block d) Static nested classes	
			10. Use Final keyword in the following levels a) Final variable b) Final method c) Final classes	
			11. Use ‘this’ keyword in the following purposes a) Referencing instance variable b) Invoking another constructor c) Passing current object as a parameter d) Returning current object	
			12. Use ‘super’ keyword in the following purposes a) Accessing superclass members b) Calling superclass constructor c) Invoking superclass methods	
	4	Generics in Java		12.00 PM to 01.00 PM
			13. Single type parameter generic class	
			14. Multiple type parameter generic class	
			15. Using generics on methods example	
			16. Restrict use of primitive types using generics	
	5	Java utilities		01.00 PM to 02.00 PM
			17. Use Scanner to get Char, String, Int, Float and Double input at same moment.	

			18. Find System Date and Time using Date class	
			19. Use UUID to generate a random Universally Unique Identifier	
			20. Java toString() and equals() method.	
	6	**CLASS TEST 2**		02.00 PM to 03.00 PM

Course Coordinator **HOD**