



SWARNANDHRA

COLLEGE OF ENGINEERING & TECHNOLOGY

(AUTONOMOUS)

Accredited by National Board of Accreditation, AICTE, New Delhi, Accredited by NAAC with "A" Grade – 3.32 CGPA, Recognized under 2(f) & 12(B) of UGC Act 1956, Approved by AICTE, New Delhi, Permanent Affiliation to JNTUK, Kakinada Seetharampuram, W.G.DT., Narsapur-534280, (Andhra Pradesh)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TEACHING PLAN

Course Code	Course Title	Semester	Branches	Contact Periods /Week	Academic Year	Date of commencement of Semester
	JAVA PROGRAMMING LANGUAGE	III	CSE	5	2020-21	

COURSE OUTCOMES

1	Describe the differences between POP & OOP , Explain OOP Concepts , JAVA features, JAVA basics, Inheritance (K1,K2)
2	State and Implement the Packages and Interfaces .(K1)
3	State and Apply Exception Handling and Multithreading Concepts .(K1,K3)
4	State and Apply JAVA Collections Framework .(K1,K3)
5	State and Explain concepts of GUI Programming with Swing, Event Handling, Applets (K1,K3)

Unit	Out Comes / Bloom's Level	Topics No.	Topics/Activity	Text Book / Reference	Cont act Hour	Delivery Method
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UNIT-I: Object-oriented thinking & Inheritance

I	CO1: Describe the differences between POP & OOP , Explain OOP Concepts , JAVA features, JAVA basics, Inheritance (K1,K2)	1.1.1	Object-oriented thinking: A way of viewing world,Agents and Communities	T1	1	Chalk ,talk
		1.1.2	messages and methods, Responsibilities, Classes and Instances	T1	1	Chalk ,talk
		1.1.3	Class Hierarchies Inheritance, Method binding, Overriding and Exceptions	T1	1	Chalk ,talk
		1.1.4	Java buzzwords	T1	1	Chalk ,talk
		1.1.5	An Overview of Java, Data types Variables and Arrays	T1	2	Chalk , talk,PPT
		1.1.6	operators, expressions	T1	1	Chalk ,talk
		1.1.7	control statements	T1	1	PPT
		1.1.8	Introducing classes, Methods and Classes	T1	1	Chalk, talk,PPT
		1.1.9	String handling	T1	1	PPT
		1.2.1	Inheritance: Inheritance concept, Inheritance basics, Member access	T1	1	Web Resources
		1.2.2	Constructors	T1	1	PPT



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		1.2.3	Creating Multilevel hierarchy	T1	1	NPTEL video
		1.2.4	super uses, using final with inheritance	T1	1	Web Resources
		1.2.5	Polymorphism-ad hoc polymorphism, pure polymorphism	T1	1	Chalk ,talk
		1.2.6	method overriding	T1	1	PPT
		1.2.7	abstract classes, Object class	T1	1	Web Resources
		1.2.8	forms of inheritance- specialization, specification, construction, extension	T1	1	Web Resources
		1.2.9	limitation, combination, benefits of inheritance, costs of inheritance.	T1	1	Chalk ,talk
	Content beyond Syllabus (if needed)		Naming Conventions	T1	1	PPT
Total					20	
UNIT-II: Packages, Interfaces & Stream based I/O(java.io)						
II	CO2: State and Implement the Packages and Interfaces. (K1)	2.1.1	Packages- Defining a Package importing packages.	T2	1	Chalk ,talk
		2.1.2	CLASSPATH, Access protection	T2	1	Web Resources
		2.2.1	Interfaces- defining an nterface, implementing interfaces	T2	1	Chalk , talk
		2.2.2	Nested interfaces, applying interfaces	T2	1	Chalk ,talk
		2.2.3	variables in interfaces and extending interfaces.	T2	1	Web Resources
		2.3.1	Stream based I/O(java.io) – The Stream classes-Byte streams and Character streams	T3	1	Web Resources
		2.3.2	Reading console Input and Writing Console Output	T3	1	Chalk ,talk, ppt
		2.3.3	File class, Reading and writing files, Random access file operations	T3	1	PPT
		2.3.4	The Console class, Serialization	T3	1	Web Resources
		2.3.5	Enumerations, auto boxing, generics.	T3	1	Chalk ,talk
	Content beyond Syllabus (if needed)		Wrapper Classes	T1	1	Chalk ,talk



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Total				11		
UNIT-III: Exception handling & Multithreading						
III	CO3: State and Apply Exception Handling and Multithreading Concepts. (K1,K3)	3.1.1	Exception handling - Fundamentals of exception handling, Exception types, creating own exception sub classes	T1	1	Chalk ,talk
		3.1.2	Termination or presumptive models, Uncaught exceptions	T1	1	Chalk ,talk, ppt
		3.1.3	using try and catch, multiple catch clauses	T1	1	Web Resources
		3.1.4	nested try statements, throw, throws and finally	T1	1	NPTEL video
		3.1.5	built- in exceptions.	T1	1	PPT
		3.2.1	Multithreading- Differences between thread-based multitasking and process-based multitasking,	T3	1	PPT
		3.2.2	Java thread model, creating threads, thread priorities,	T3	1	Web Resources
		3.2.3	synchronizing threads, inter thread communication	T3	1	Chalk ,talk
	Content beyond Syllabus (if needed)		Thread Grouping	T3	1	Chalk ,talk
Total				9		
UNIT-IV: The Collections Framework (java.util)						
IV	CO4: State and Apply JAVA Collections Framework k.(K1,K3)	4.1.1	The Collections Framework (java.util)- Collections overview, Collection Interfaces	T1	1	PPT
		4.1.2	The Collection classes- Array List, Linked List, Hash Set, Tree Set, Priority Queue, Array Deque.	T1	1	Web Resources
		4.1.3	Accessing a Collection via an Iterator, Using an Iterator,	T1	1	Chalk ,talk
		4.1.4	The For-Each alternative, Map Interfaces and Classes, Comparators,	T1	1	PPT
		4.1.5	Collection algorithms, Arrays,	T1	1	Chalk ,talk
		4.1.6	The Legacy Classes and Interfaces- Dictionary, Hashtable, Properties, Stack, Vector	T1	1	Web Resources
		4.1.7	More Utility classes, String Tokenizer, Bit Set, Date, Calendar,	T1	1	Web Resources



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			Random, Formatter, Scanner			
	Content beyond Syllabus (if needed)		Case study on Framework		1	Chalk ,talk, ppt
Total					8	
UNIT-V: GUI Programming with Swing, Event Handling & Applets						
V	CO5: State and Eplain concepts of GUI Programmi ng with Swing, Event Handling, Applets (K1,K3)	5.1.1	GUI Programming with Swing – Introduction, limitations of AWT,	T1	1	Web Resources
		5.1.2	MVC architecture, components, containers.	T1	1	Web Resources, Chalk ,talk
		5.1.3	Understanding Layout Managers, Flow Layout, Border Layout, Grid Layout, Card Layout, Grid Bag Layout	T1	2	Chalk ,talk, ppt
		5.2.1	Event Handling- The Delegation event model- Events, Event sources, Event Listeners, Event classes,	T1	1	PPT
		5.2.2	Handling mouse and keyboard events,	T1	1	Web Resources
		5.2.3	Adapter classes, Inner classes, Anonymous Inner classes. A Simple Swing Application,	T1	1	Chalk ,talk
		5.3.1	Applets – Applets and HTML, Security Issues,	T2	1	Web Resources
		5.3.2	Applets and Applications, passing parameters to applets.	T2	1	Chalk ,talk, ppt
		5.3.3	Creating a Swing Applet, Painting in Swing, A Paint example,	T2	1	Chalk ,talk
		5.3.4	Exploring Swing Controls- JLabel and Image Icon, JText Field,	T2	1	NPTEL video
		5.3.5	The Swing Buttons- JButton, JToggle Button, JCheck Box, JRadio Button,	T2	1	NPTEL video
		5.3.6	JTabbed Pane, JScroll Pane, JList, JCombo Box, Swing Menus, Dialogs.	T2	1	NPTEL video
	Content beyond Syllabus (if needed)		Case study on APPLET & SWING		1	Chalk ,talk, PPT
Total					14	
CUMULATIVE PROPOSED PERIODS					62	



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Text Books:	
S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION
1	Herbert Schildt ,Java: The Complete Reference, 11 th edition– 2019
2	Balagurusamy, “Programming with Java A Primer” 6 th edition -2019.
3	Neos Thanh, Java Programming: MULTITHREADING and CONCURRENT, FILE IO and NETWORKING, Independently Published, 2019
Reference Books:	
S.No.	AUTHORS, BOOK TITLE, EDITION, PUBLISHER, YEAR OF PUBLICATION
1	Steve Tudor, JAVA: The Practical Beginner’s Guide to Learn Java Programming in One Day Step-by-Step (#2020 Updated Version Effective Computer Programming), Independently published (November 7, 2019)
2	saurabh chaudhary , sachin malhotra, Programming in Java by, oxford edition.- 2018
3	Let Us Java Paperback by Yashavant Kanetkar – 2017
Web Details	
1	https://www.w3schools.com/
2	https://www.tutorialspoint.com/
3	https://www.javatpoint.com/

		Name	Signature with Date
i.	Faculty	K.Haritha Rani	
ii.	Faculty II (for common Course)	P.Srinivasa Rao	
iii.	Faculty III (for common Course)	K.Prabhakar	
iv.	Course Coordinator	K.Haritha Rani	
v.	Module Coordinator	P.Srinivasa Rao	
vi.	Programme Coordinator	Dr.P.Srinivasulu	

Principal