



LESSON PLAN

Subject: OBJECT ORIENTED PROGRAMMING THROUGH JAVA		
Year : I B-Tech	Semester: II	Branch : ECE
Faculty: MD.IMRAN	Reg: R20	Academic Year : 2020-21

COURSE OBJECTIVES:

This subject will help to improve

- the analytical skills of object oriented programming
- Overall development of problem solving and critical analysis.
- Formal introduction to Java programming language

COURSE OUTCOMES :

On successful completion of this course, the student should be able to:

- Show competence in the use of the Java programming language in the development of small to medium- sized application programs that demonstrate professionally acceptable coding and performance standard
- Illustrate the basic principles of the object-oriented programming
- Demonstrate an introductory understanding of graphical user interfaces, multithreaded programming, and event-driven programming.

Activity / Schedule of UNIT-1 :

Pre-Class : Videos, E-books, Web links, Case Studies etc...

In-Class : Explanation on concept, discussion, Poll, doubts clarification, PPT, Demo etc..

Post-Class : Discussion Forum, Review on topic, Assessment, Quiz, Notes etc....

CLASS SL.NO	CONCEPT	OBJECTIVES	PRE-CLASS	IN-CLASS	POST-CLASS
1	UNIT-I Introduction to Java	To Introduce the concept of Java	Video Link : https://www.youtube.com/watch?v=mG4NLNZ37y4 Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summary (5min) Doubts clarification (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic

2	Basics of Java programming	To understand the concept of Basics of Java programming	Video Link : https://www.youtube.com/watch?v=IL2PXC1fnnQ Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
3	Data types	To understand the concept of Data types	Video Link : https://www.youtube.com/watch?v=0MFC_Vw9NxY Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
4	Variables	To understand the concept of Variables	Video Link : https://www.youtube.com/watch?v=FUSqzYxJ-g Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
5	Operators	To understand the concept of Operators	Video Link : https://www.youtube.com/watch?v=8CX4Tdtbqk Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
6	Control structures including selection	To understand the concept of Control structures including selection	Video Link : https://www.youtube.com/watch?v=qS3XgxjRBQ0 Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
7	Looping	To understand the concept of Looping	Video Link : https://www.youtube.com/watch?v=4nbofvALfKQ Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
8	Java methods	To understand the concept of Java methods	Video Link : https://www.youtube.com/watch?v=r0SewFmbCUI Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic

9	Overloading	To understand the concept of Overloading	Video Link : https://www.youtube.com/watch?v=NECF2CK9ZaE Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
10	Math class	To understand the concept of Math class	Video Link : https://www.youtube.com/watch?v=euCfXxmFck Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
11	Arrays in java	To understand the concept of Arrays in java	Video Link : https://www.youtube.com/watch?v=hhScibE9dJw Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
12	Objects and Classes	To understand the concept of Objects and Classes	Video Link : https://www.youtube.com/watch?v=cXj1hHdMNk4 Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
13	Basics of objects and classes in java	To understand the concept of Basics of objects and classes in java	Video Link : https://www.youtube.com/watch?v=cXj1hHdMNk4 Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
14	Constructors	To understand the concept of Constructors	Video Link : https://www.youtube.com/watch?v=Bh5qETmJgJM Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
15	Finalizer	To understand the concept of Finalizer	Video Link : https://www.youtube.com/watch?v=frOMAW-Ynvg Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic

16	Visibility modifiers	To understand the concept of Visibility modifiers	Video Link : https://www.youtube.com/watch?v=Ruy-yzj-JG8 Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
17	Methods and objects	To understand the concept of Methods and objects	Video Link : https://www.youtube.com/watch?v=Ruy-yzj-JG8 Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
18	Inbuilt classes like String	To understand the concept of Inbuilt classes like String	Video Link : https://www.youtube.com/watch?v=8mwYr2I1zeM Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
19	Character	To understand the concept of Character	Video Link : https://www.youtube.com/watch?v=vYEpVHi9_b8 Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
20	StringBuffer	To understand the concept of StringBuffer	Video Link : https://www.youtube.com/watch?v=wmXW5jVK6fw Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
21	File	To understand the concept of File	Video Link : https://www.youtube.com/watch?v=QfGVi89AV4c Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
22	this reference	To understand the concept of this reference	Video Link : https://www.youtube.com/watch?v=6gVch3hXu_o Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic

23	UNIT-II Inheritance and Polymorphism	To introduce the concept of Inheritance and Polymorphism	Video Link : https://www.youtube.com/watch?v=nixQyPIAnOQ Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
24	Inheritance in java	To understand the concept of Inheritance in java	Video Link : https://www.youtube.com/watch?v=nixQyPIAnOQ Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
25	Super and sub class	To understand the concept of Super and sub class	Video Link : https://www.youtube.com/watch?v=0PPKccntohM Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
26	Overriding	To understand the concept of Overriding	Video Link : https://www.youtube.com/watch?v=fw1r3uIWAAA Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
27	Object class	To understand the concept of Object class	Video Link : https://www.youtube.com/watch?v=juGJLW1_fXU Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
28	Polymorphism	To understand the concept of Polymorphism	Video Link : https://www.youtube.com/watch?v=jg4MpYr1TBc Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
29	Dynamic binding	To understand the concept of Dynamic binding	Video Link : https://www.youtube.com/watch?v=cz1BFU290uY Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic

30	Generic programming	To understand the concept of Generic programming	Video Link : https://www.youtube.com/watch?v=22AUtQnTZkY Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
31	Casting objects	To understand the concept of Casting objects	Video Link : https://www.youtube.com/watch?v=9ATVKpRZaPg Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
32	Instance of operator	To understand the concept of Instance of operator	Video Link : https://www.youtube.com/watch?v=JPn8vYbSiZk Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
33	Abstract class	To understand the concept of Abstract class	Video Link : https://www.youtube.com/watch?v=vkYJFrTrh5M Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
34	Interface in java	To understand the concept of Interface in java	Video Link : https://www.youtube.com/watch?v=Ggxn8Q9VuE Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
35	Package in java	To understand the concept of Package in java	Video Link : https://www.youtube.com/watch?v=mjjEPYPCri8 Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
36	UTILpackage	To understand the concept of UTILpackage	Video Link : https://www.youtube.com/watch?v=7ozxcE1mLAs Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic

37	Unit III Event and GUI programming	To introduce the concept of Event and GUI programming	Video Link : https://www.youtube.com/watch?v=Wh00-kTUIG8 Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
38	Event handling in java	To understand the concept of Event handling in java	<u>Video Link :</u> https://www.youtube.com/watch?v=3EE7E3bvf8 <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
39	Event types	To understand the concept of Event types	<u>Video Link :</u> https://www.youtube.com/watch?v=c017DSxLSH4 <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
40	Mouse and key events	To understand the concept of Mouse and key events	<u>Video Link :</u> <u>Web Link :</u> https://www.javatpoint.com/java-tutorialhttps://www.youtube.com/watch?v=c017DSxLSH4	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
41	GUI Basics	To understand the concept of GUI Basics	<u>Video Link :</u> https://www.youtube.com/watch?v=O2xzkCgY0PY <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
42	Panels	To understand the concept of Panels	<u>Video Link :</u> https://www.youtube.com/watch?v=GvTZ2Huo0T4 <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
43	Frames	To understand the concept of Frames	Video Link : https://www.youtube.com/watch?v=GvTZ2Huo0T4 Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic

44	Layout Managers	To understand the concept of Layout Managers	<u>Video Link :</u> https://www.youtube.com/watch?v=IsaIsW49PI8 <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
45	Flow Layout	To understand the concept of Flow Layout	<u>Video Link :</u> https://www.youtube.com/watch?v=IsaIsW49PI8 <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
46	Border Layout	To understand the concept of Border Layout	<u>Video Link :</u> https://www.youtube.com/watch?v=IsaIsW49PI8 <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
47	Grid Layout	To understand the concept of Grid Layout	<u>Video Link :</u> https://www.youtube.com/watch?v=IsaIsW49PI8 <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
48	GUI components like Buttons	To understand the concept of GUI components like Buttons	<u>Video Link :</u> https://www.youtube.com/watch?v=8N3xjSpkebk <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
49	Check Boxes	To understand the concept of Check Boxes	<u>Video Link :</u> https://www.youtube.com/watch?v=8N3xjSpkebk <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
50	Radio Buttons	To understand the concept of Radio Buttons	<u>Video Link :</u> https://www.youtube.com/watch?v=8N3xjSpkebk <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic

51	Labels	To understand the concept of Labels	<u>Video Link :</u> https://www.youtube.com/watch?v=8N3xjSpkebk <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
52	Text Fields	To understand the concept of Text Fields	<u>Video Link :</u> https://www.youtube.com/watch?v=8N3xjSpkebk <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
53	Text Areas	To understand the concept of Text Areas	<u>Video Link :</u> https://www.youtube.com/watch?v=8N3xjSpkebk <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
54	Combo Boxes	To understand the concept of Combo Boxes	<u>Video Link :</u> https://www.youtube.com/watch?v=iOV_oaJhABQ <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
55	Lists	To understand the concept of Lists	<u>Video Link :</u> https://www.youtube.com/watch?v=EKSfUGHZ_ZE <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
56	Scroll Bars	To understand the concept of Scroll Bars	<u>Video Link :</u> https://www.youtube.com/watch?v=vIM2sS2KB54 <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
57	Sliders	To understand the concept of Sliders	<u>Video Link :</u> https://www.youtube.com/watch?v=-rJdMaSgt38 <u>Web Link :</u> https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic

58	Windows	To understand the concept of Windows	Video Link : https://www.youtube.com/watch?v=H6kBywgciB4 Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
59	Menus	To understand the concept of Menus	Video Link : https://www.youtube.com/watch?v=cpOhKw9qHug Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
60	Dialog Box	To understand the concept of Dialog Box	Video Link : https://www.youtube.com/watch?v=sDjNuiBwIcM Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
61	Applet and its life cycle	To understand the concept of Applet and its life cycle	Video Link : https://www.youtube.com/watch?v=_B6w0t1-wsM Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
62	Introduction to swing	To understand the concept of Introduction to swing	Video Link : https://www.youtube.com/watch?v=8z0tJaAP4Ac Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
63	Creating a swing applet	To understand the concept of Creating a swing applet	Video Link : https://www.youtube.com/watch?v=EEv8kinU9vI Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
64	swing controls and components	To understand the concept of swing controls and components	Video Link : https://www.youtube.com/watch?v=niJ1tANWwFk Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic

65	Unit IV I/O programming	To introduce the concept of I/O programming	Video Link : https://www.youtube.com/watch?v=OfGVi89AV4c Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
66	Text and Binary I/O	To understand the concept of Text and Binary I/O	Video Link : https://www.youtube.com/watch?v=OfGVi89AV4c Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
67	Binary I/O classes	To understand the concept of Binary I/O classes	Video Link : https://www.youtube.com/watch?v=OfGVi89AV4c Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
68	Object I/O	To understand the concept of Object I/O	Video Link : https://www.youtube.com/watch?v=OfGVi89AV4c Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
69	Random Access Files	To understand the concept of Random Access Files	Video Link : https://www.youtube.com/watch?v=a3IDKCNf2VU Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
70	Event driven model	To understand the concept of Event driven model	Video Link : https://www.youtube.com/watch?v=v4w8rkUHO5g Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
71	handling events	To understand the concept of handling events	Video Link : https://www.youtube.com/watch?v=sQPKQ3SIzTk Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic

72	Unit V Multithreading in java	Multithreading in java	Video Link : https://www.youtube.com/watch?v=Yk7BXaotJ24 Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
73	Thread life cycle and methods	To understand the concept of Thread life cycle and methods	Video Link : https://www.youtube.com/watch?v=cSgmd2BXM7Y Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
74	Runnable interface	To understand the concept of Runnable interface	Video Link : https://www.youtube.com/watch?v=xvXbvrUUGMM Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
75	Thread synchronization	To understand the concept of Thread synchronization	Video Link : https://www.youtube.com/watch?v=RH7G-N2pa8M Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
76	Exception handling with try-catch-finally	To understand the concept of Exception handling with try-catch-finally	Video Link : https://www.youtube.com/watch?v=W-N2ltgU-X4 Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
77	Collections in java	To understand the concept of Collections in java	Video Link : https://www.youtube.com/watch?v=5NOLuoG6fcO&list=PLsveobzWxl7rsZPajEm5GnIWosY1mMx bd Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
78	Introduction to JavaBeans	To understand the concept of JavaBeans	Video Link : https://www.youtube.com/watch?v=jhcoCVWyODs&list=PLsveobzWxl7rsZPajEm5GnIWosY1mMx bd Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic

79	Network Programming	To understand the concept Network Programming	Video Link : https://www.youtube.com/watch?v=5Lm6nB3lsF8 Web Link : https://www.javatpoint.com/java-tutorial	Discussion on pre-requisites (10 Min) PPT presentation (30 Min) Discussion or Poll activity (5 min) Summery (5min) Doubts clari-fication (10 min)	Discussion Forum on the topic in the group Review on the topic Share material on the topic
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