VEER NARMAD SOUTH GUJARAT UNIVERSITY – SURAT
T Y B. Sc. (Computer Science)
Syllabus for T. Y. B. Sc. Semester-VI
Effective From: June-2019
Course: 604: Java Programming – II

<table>
<tr><td>Course Code</td><td>604</td></tr>
<tr><td>Course Title</td><td>Java Programming – II</td></tr>
<tr><td>Credit</td><td>2</td></tr>
<tr><td>Teaching per Week</td><td>2 Hrs</td></tr>
<tr><td>Minimum weeks per Semester</td><td>15 (Including Class work, examination, preparation, holidays etc.)</td></tr>
<tr><td>Last Review / Revision</td><td>June, 2019</td></tr>
<tr><td>Purpose of Course</td><td>To teach advanced object oriented programming concepts through programming using Java as the computer Programming language.</td></tr>
<tr><td>Course Objective</td><td>1. To make students understand object oriented programming.
2. To make students understand various inbuilt java concepts like threads
3. To make students understand the GUI and concepts of APPLET.
4. To make students understand various components and their properties.</td></tr>
<tr><td>Pre-requisite</td><td>Fundamentals of Object Oriented Programming Language. Knowledge of Core Java.</td></tr>
<tr><td>Course Out come</td><td>CO1. Explain students the concepts of thread with needs.
CO2. Train students to develop Java program with multi thread concepts.
CO3. Explain implementation of Thread communication and synchronization to make students able to develop read world application.
CO4. Train students to develop Applets, GUI Programming using various control classes, Event Handling.
CO5. Explain implementation of Crud operation using JDBC.
CO6. Explain basics of JSP to make students able to use java for web application
CO7. Explain students to Servlet life cycle.</td></tr>
<tr><td>Mapping between COs with PSOs</td><td>
<table>
<tr><th></th><th>PSO1</th><th>PSO2</th><th>PSO3</th><th>PSO4</th><th>PSO5</th><th>PSO6</th></tr>
<tr><td>CO1</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO2</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO3</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO4</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO5</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO6</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CO7</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
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<tr><td>Course Content</td><td>Unit 1. Concepts of Thread</td></tr>
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	1.1. Basics of Thread 1.2. Thread Life cycle, working of Thread. 1.3. Creating Thread using Thread class and Runnable Interface. 1.4. Extending, Stopping and Pausing Threads. 1.5 Concepts of Daemon Thread. 1.6 Priority of Thread and Thread scheduling 1.7 Parallel execution of Thread in Synchronous and asynchronous mode. **Unit 2. GUI Programming using Java** 2.1 Applet 2.1.1 Introduction to applet 2.1.2 Difference between Applet and Application. 2.1.3 Life cycle of Applet 2.1.4 Invoking Applet, Passing parameters to Applet 2.2 Abstract Window Toolkit (AWT)- Component Class: Container, Panel, LayoutManager 2.3 UI Controls:- Lables, TextFields, CheckBoxes, RadioButtons, ChoiceList, ChoiceMenu, List 2.4 Event handling 2.4.1 Handling Button, Checkbox, RadioButton Events 2.4.2 Handling Combobox, List, TextField, TextArea Events **Unit-3 JDBC** 3.1 Introduction to JDBC 3.1.1 Java database connectivity, Driver class 3.1.2 CRUD operations with Statement Object, PreparedStatement object, callable statement object 3.1.3 The ResultSet Object **Unit - 4 Java Server Pages &Java Servlets** 4.1 Overview of Java Server Pages (JSP) & JSP lifecycle, 4.1.1 Directives Page Directive, Include Directive, Taglib Directive 4.1.2 Scripting Elements-Comment Element, Declaration Element, Scriptlets , Expression Element 4.1.3 Standard Actions – include, forward, plugins 4.2 Introduction to Java Servlets 4.2.1 The Java Servlet API 4.3.1 The Servlet Life Cycle
References Books:	1.The Complete Reference Java2 Herbert Schildt TMH, New Delhi 2. Mastering JAVA2 John Zukowski BPB 3. Teach Yourself Java2 platform in 21 days Lamey&Cadenhead Teach Media 4 Java in Nut shell - O'Relly Publication 5 Java Language Reference - O'Relly Publication
Teaching Methodology	Class Work, Discussion, Self-Study, Seminars and/or Assignments

Evaluation Method	30% Internal assessment. 70% External assessment