



FIRST MODULE

Credit Hrs.

OVERVIEW OF JAVA LANGUAGE	1
INTRODUCTION	
H/W AND S/W REQUIREMENTS	
INSTALLATION OF JDK	
PROGRAMMING WITH JAVA	4
CLASS DECLARATION	
MEMBERS OF CLASSES	
STRUCTURE OF JAVA CLASS	
MAIN METHOD	
COMMAND LINE ARGUMENTS	
SOURCE CODE COMPILATION	
CODING CONVENTION	
JAVA PACKAGES	
CONSTANT, VARIABLES AND DATA TYPES	1
PRIMITIVES AND NON-PRIMITIVES VARIABLES	
DECISION AND BRANCHING	2
IF, ELSE, SWITCH, BREAK, CONTINUE	
LOOPING	4
FOR, WHILE, DO-WHILE	
FUNDAMENTALS OF LOOPS	10
INITIALIZING OBJECTS	
STATIC MEMBERS	
INHERITANCE	
POLYMORPHISM	
ENCAPTULATION	
ABSTRACT CLASS AND INTERFACES	4
DEFINING INTERFACES	
SEPARATING INTERFACE AND IMPLEMENTATION	
IMPLEMENTING AND EXTENDING INTERFACES	
ABSTRACT CLASSES	
EXCEPTION HANDLING	2
EXCEPTIONS AND THE EXCEPTION HIERARCHY	
THROWING EXCEPTIONS	
CATCHING EXCEPTIONS	
CHAINING EXCEPTIONS	
THE FINALLY BLOCK	



ADVANCE DATA STRUCTURES (JAVA COLLECTION CLASSES)	4
ARRAYS	
LIST<E> INTERFACE AND ITS IMPLEMENTATION	
MAP<K,V> INTERFACE AND IMPLEMENTATION	
SET<E> INTERFACE AND IMPLEMENTATION	
JDBC CONNECTION	6
JDBC OVERVIEW	
USING DRIVERMANAGER, CONNECTION, STATEMENT, PREPAREDSTATEMENT AND RESULTSET	
CREATE, DELETE, INSERT, UPDATE STATEMENTS	
JAVA DOC AND JAVA LIBRARIES	2
PREPARING JAVA DOC	
EXPORTING JAVA DOC	
IMPLEMENTING JAVA LIBRARIES	
STRING CLASS	
MATH CLASS	
TOTAL	40

SECOND MODULE

	Credit Hrs.
WEB APPLICATION BASICS	2
HOW THE WEB WORKS	
HTTP OVERVIEW, BRIEF HTML REVIEW	
OVERVIEW OF JAVA EE, SERVLETS & WEB APPLICATIONS.	
SERVLET API	6
HTML FORMS	
HTTP: REQUEST-RESPONSE, HEADERS, GET, POST	
OVERVIEW: HOW SERVLETS WORK	
<i>SERVLET LIFECYCLE: INIT(), SERVICE(), DESTROY()</i>	
<i>REQUESTS AND RESPONSES</i>	
HTTP SERVLETS: HTTPSERVLETREQUEST, HTTPSERVLETRESPONSE AND HTTPSERVLET	
DEPLOYMENT DESCRIPTOR	
ACCESSING PARAMETERS	
ADDITIONAL SERVLET CAPABILITIES	4
REQUESTDISPATCHER: INCLUDING AND FORWARDING	
SHARING DATA WITH THE REQUEST OBJECT ATTRIBUTES	
SHARING DATA WITH SERVLETCONTEXT AND APPLICATIONCONTEXT	
JAVASERVER PAGES	8
BASICS AND OVERVIEW	



LIFECYCLE OF A JSP

SCRIPTLET , PAGE DIRECTIVE
MODEL VIEW CONTROLLER (MVC)
DATA SHARING AMONG SERVLETS & JSP
REQUEST, APPLICATION, SESSION AND PAGE SCOPE
PREDEFINED JSP IMPLICIT OBJECTS (REQUEST, SESSION, APPLICATION, PAGE)
<JSP:INCLUDE>, <JSP:FORWARD>

USING CUSTOM TAGS8

CUSTOM TAGS TO REDUCE JSP COMPLEXITY
THE JSTL
JSP EXPRESSION LANGUAGE (EL)
USING CUSTOM TAGS
THE C:URL, C:PARAM, C:FOREACH, C:OUT TAGS

MORE JSP CAPABILITIES AND SESSION MANAGEMENT8

HTTP AS A STATELESS PROTOCOL
HIDDEN FORM FIELDS
COOKIES: OVERVIEW, API, USING COOKIES
SESSION OVERVIEW: COOKIES AND SESSION TRACKING
HTTPSESSION
PUTTING DATA INTO A SESSION OBJECT
RETRIEVING DATA FROM A SESSION OBJECT
USING SESSION DATA IN SERVLETS AND JSPS

ADDITIONAL TOPICS.....4

SERVLET FILTER OVERVIEW
FILTERING EXAMPLES, LIFECYCLE, & FILTER CHAINS
FILTER API, MODIFYING A REQUEST, MODIFYING A RESPONSE

TOTAL 40

THIRD MODULE

Credit Hrs.

GROOVY FUNDAMENTALS

DIFFERENCES BETWEEN GROOVY AND JAVA.....4
CLOSURES
LISTS AND MAPS
RANGES
LISTS, MAPS, AND SETS

GRAILS PROJECT STRUCTURE

OVERVIEW OF A GRAILS PROJECT.....4
DIRECTORIES FOR MODEL CLASSES, CONTROLLERS, AND VIEWS
DATA SOURCE CONFIGURATION



COMMAND LINE UTILITIES
IDE INTEGRATION

DOMAIN CLASSES

OBJECT-RELATIONAL MAPPING WITH GORM.....8
CONSTRAINTS AND VALIDATION
MODELING RELATIONSHIPS
PERFORMING CRUD OPERATIONS
DYNAMIC QUERIES

SCAFFOLDING2

GENERATING CONTROLLERS
GENERATING VIEWS

CONTROLLERS.....5

SETTING THE DEFAULT ACTION
ACCESSING REQUEST ATTRIBUTES
FLASH SCOPE
RENDERING A RESPONSE
REDIRECTS AND RETURNS

GROOVY SERVER PAGES

BUILT-IN GRAILS TAGS7
LAYOUTS AND TEMPLATES
CREATING CUSTOM TAGS

ADDING AJAX SUPPORT

BASICS OF AJAX5
AJAX-SUPPORTING TAGS
RENDERING JSON AND XML RESPONSES

SERVICES

TRANSACTIONS5
SERVICES AND DEPENDENCY INJECTION

TOTAL 40

Fee Structure

Total Fees: **NRS 24,000.**

NRS 24,000 must be paid at the time of admission.