MODULE I **9**

Project definition – Contract management – Activities covered by software project management – Plans, methods and Methodologies – Stakeholders – Management control – Traditional versus modern project management practices – Overview of project planning – Stepwise project planning.

MODULE II **18**

Project portfolio management – Evaluation of individual projects – Technical assessment – Cost benefit analysis – Cash flow forecasting – Cost benefit evaluation techniques – Risk evaluation – Project schedule – Sequencing and scheduling activities – Network planning models – Forward pass – Backward pass – Activity float – Shortening project duration – Activity on arrow networks – Categories of Risk – Risk identification – Risk assessment – Risk planning – Risk management – Applying the PERT techniques – CPM techniques.

MODULE III **18**

Creating framework – Collecting the data – Visualizing progress – Cost monitoring – Earned value – Prioritizing – Monitoring – Getting project back to target – Change control – Managing contracts – Introduction – Types of contract – Stages in contract placement – Typical terms of a contract – Contract management – Acceptance – Managing people and organizing teams – Introduction – Understanding behavior – Organizational behavior – Selecting the right person for the job – Instruction in the best methods – Motivation – The Oldham-Hackman job characteristics model – Becoming a team – Decision making – Leadership – Organizational structures – Performance management – Stress – Health and safety – Case studies.

TOTAL: 45

TEXT BOOK:

SI.No.	Author(s)	Title of the Book	Publisher	Year of Publication
1.	Bob Hughes and Mike Cotterell	Software Project Management	Tata McGraw Hill, Fifth Edition	2011

REFERENCE BOOKS:

SI.No.	Author(s)	Title of the Book	Publisher	Year of Publication
1.	Gopalaswamy Ramesh	Managing Global Software Projects	Tata McGraw Hill First Edition	2009
2.	Walker Royce	Software Project Management	Pearson Education Tenth Edition	2013
3.	Kelkar S A	Software Project Management: A Concise Study	PHI Learning Third Edition	2013

WEB URLs:

1. www.at– web1.comp.glam.ac.uk/staff/dwfarthi/projman.htm
2. www.ccca-accje.org
3. www.cs.ox.ac.uk/people/michael.wooldridge/teaching/soft-eng/lect05.pdf
4. www.nptel.com
5. www.tutorialspoint.com

18PE18/18FE18 WEB APPLICATION DEVELOPMENT USING JAVA

(Common to CSE/IT)

3 0 4 5

PRE-REQUISITES: Advanced Java Programming

OBJECTIVES:

- To learn the basic fundamental concepts of web application development using java.
- To understand the concepts of Bootstrap and XML.
- To gain knowledge on Servlets and JSP for creating application.
- To learn concepts of Object Relational Mapping for developing web application.
- To understand the concepts of Servlet and JSP with ORM in web applications.

OUTCOMES:

Learner should be able to

- understand, define and explain the concepts of web application development using Java.
- apply the knowledge of front end and bake end technologies for developing web applications.
- analyze the usage of web application development concepts and to attain the appropriate conclusions.
- design an application using HTML, JavaScript and XML for given specifications.
- conduct experiments integrating Servlet and JSP with ORM for a given application / problem statement.
- perform in a team to build a web-based application.

MODULE I **9**

HTML – Introduction to HTML and its elements – Layout tags – Semantic tags – Application tags – Logical tags. Introduction to HTML5. CSS: Introduction to CSS – Styles and stylesheets – Formatting with CSS – Links and lists – CSS box model – CSS3. Bootstrap: Introduction to bootstrap – Formatting and styling using bootstrap – Bootstrap grid system.

MODULE II **18**

JavaScript: Introduction to javascript – Javascript functions and objects – Javascript validations – Regular expression. XML: Introduction to XML – XML DTD – XML schema. Servlets – Introduction to servlets – Get and post requests – Servlet API and lifecycle – Servlet request and response interfaces – Httpservlet – Requestdispatcher – Httpsession – Cookies and session management – Servlet database interaction.

MODULE III **18**

JSP: Introduction to JSP – JSP API – Scripting elements – Directive elements – Action elements – implicit objects – Java beans in JSP – Cookies and session management. Object/Relational mapping – Approaches to ORM – Introduction to hibernate – Hibernate API – Working with objects – Hibernate 3 with annotations – Querying in hibernate – Hibernate Query Language (HQL) – Criteria queries – Create queries with native SQL – Basic O/R mapping – Collection mapping – Association mappings – Inheritance mapping – Develop a web application using hibernate.

TOTAL: 45

LIST OF EXPERIMENTS:

1. Developing static web pages using HTML.
2. Developing web site using HTML and CSS.
3. Developing web site using bootstrap.
4. Developing dynamic web pages using java script.
5. Validating web pages using java script.
6. Creating XML page with DTD.
7. Developing web application using servlets.
8. Developing web application using JSP.
9. Developing application using ORM framework.
10. Integrating servlet and JSP with ORM.

TEXT BOOKS:

S.No.	Author(s)	Title of the Book	Publisher	Year of Publication
1.	Paul Deitel, Harvey Deitel and Abbey Deitel	Internet and World Wide Web – How to program	Pearson Education. Fifth Edition	2018
2.	Sharanam Shah and Vaishali Shah	Java EE 6 for Beginners	Shroff Publishers, First Edition	2011

REFERENCE BOOKS:

S.No.	Author(s)	Title of the Book	Publisher	Year of Publication
1.	Santosh Kumar K	Spring and Hibernate	Tata McGraw-Hill, Second Edition	2013
2.	Joel Murach and Michael Urban	Java Servlets and JSP	Pearson Education, Third Edition	2014
3.	Budi Kurniawan	Servlet and JSP: A Tutorial	Brainy Software, Second Edition	2015

WEB URLs:

1. www.w3schools.com/html/html_css.asp
2. www.w3schools.com/xml/default.asp
3. www.tutorialspoint.com/servlets/
4. www.oracle.com/technetwork/java/javaee/jsp/index.html
5. www.javatpoint.com/hibernate-tutorial

18PE19/18FE19 WEB APPLICATION DEVELOPMENT USING PYTHON

(Common to CSE/IT)

3 0 4 5

PRE-REQUISITES: Advanced Python Programming

OBJECTIVES:

- To learn the basic fundamental concepts of web application development using python.
- To understand the concepts of Bootstrap and XML.
- To gain knowledge on Flask and Jinja2 template.
- To learn concepts of Object Relational Mapping using SQLAlchemy.
- To understand the concepts of Flask SQLAlchemy for developing web applications.

OUTCOMES:

Learner should be able to

- understand, define and explain the fundamental concepts of web application development using Python.
- apply the knowledge of python for developing basic web applications.
- analyze web application using python and to attain the appropriate conclusions.
- design an application using HTML, JavaScript and XML for given specifications.
- conduct experiments developing web application using Flask SQLAlchemy.
- perform in a team to build a web-based application.

MODULE I **9**

HTML: Introduction to HTML and its elements – Layout tags – Semantic tags – Application tags – Logical tags – Introduction to HTML5. CSS: Introduction to CSS – Styles and stylesheets – Formatting with CSS – Links and lists – CSS box model – CSS3. Bootstrap: Introduction to bootstrap – Formatting and styling using bootstrap – Bootstrap grid system.

MODULE II **18**

JavaScript: Introduction to javascript – Javascript functions and objects – Javascript validations – Regular expression. XML: Introduction to XML – XML DTD – XML schema. Flask – Application configuration – HTTP methods – Status code – Routing – Form handling – Request handling – JSON response – Session – Cookie – Templates – Jinja2 – Variable – Filters – Macro – Comments – Escaping – Template inheritance – HTML escaping – Expressions and control structures – Error handling.

MODULE III **18**

SQLAlchemy : Introduction – Connection – Mapping – Declare mapping – Schema – Creating session – Adding and updating objects – Commit and rollback – Query API – Association mapping – Mapping