**Java Enterprise Apps with DevOps**

**Student Guide**

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# Introduction

## Rationale

Digital transformation signifies the use of technology to radically improve the businesses. Organizations are using digital advances such as analytics, mobility, and social media to enhance customer relationships, business models and their product value propositions.

Over the last five years or so, there has been rapid increase in the number of technologies that promise to disrupt established ways of doing business and means that all organizations driving new initiatives should always take a Digital First approach.

Successful organizations constantly seek to improve their ability to win, serve, and retain customers. Engaging customers in digital channels through web and mobile apps is an ever-expanding part of a modern, customer-focused strategy. As organizations compete for customers in the digital realm, they look for ways to create innovative, customer-facing apps that stand out and are interconnected. As a result, there is an increasing pressure on software development companies to custom-develop apps that are tailored to fit unique business requirements.

Building such applications is not easy, especially when there is a tremendous shift in the types of devices and form factor that are in use today. Software development companies are facing a challenge in finding the necessary skills to effectively build, deploy, and maintain such modern day apps. In addition, they are expected to effectively meet the rapidly-changing market demands.

With the expanding demand and ever increasing dynamism in the software development industry, the organizations are looking for professionals who can develop such diverse apps and demonstrate capability of using Product Engineering principles.

Java platform is one such versatile technology that is used to develop apps for different types of devices. It is the foundation for virtually every type of apps. It is the global standard for developing and delivering mobile apps, games, smart cards and practically any other digital device. It powers state-of-the-art programs including set-top boxes, printers, webcams, car navigation systems, and parking payment stations. In addition, provides APIs to create rich and interactive web apps for various businesses, such as E-commerce and financial institutes.

**The Java Enterprise Apps with Dev Ops program is meant for STEM Graduates and it is designed to produce industry ready candidates for placement.**

## Goals

* **You will develop either 1 or 2 Projects of 6 weeks each during the course of the program, depending on the program registered.**
* **Using the Project-based learning methodology, you are expected to spend atleast 70% of time on project. You will be required to develop the following projects:**
  + **E-Commerce Portal and/or**
  + **Collaboration Platform**
* **During the project, you would use latest technologies like Bootstrap, JavaScript, jQuery, Angular JS, Spring MVC with Hibernate, Spring and continuous integration of code developed using Maven scripts to build responsive websites with light-weight components & high security.**
* **GitHub’s forking tools and code management features are absolutely ingrained in the programmer’s daily workflow.**
* **You are inducted to develop projects using the Industry accepted “Agile-Scrum model” of Software Development.  Weekly objectives are mapped with appropriate Project assignment.**
* **Throughout the program, Sprint (tasks) reviews are conducted to evaluate the outcome of the week. You will achieve the weekly objectives using Flipped Classroom, Expert Trainer, Personal Tech Mentors and Reference Links/Course Material.**

* **You are also encouraged to imbibe best Software Development practices and be disciplined and achieve tasks within stipulated timelines.**

## Objectives

At the end of this program, you will encompass the various aspects of enterprise app development and cover the following objectives:

* Understand and implement object-oriented concepts using Java technology
* Write SQL queries to retrieve, manage, and manipulate data
* Design responsive Web/enterprise apps using HTML5, CSS3, and various JavaScript frameworks such as Bootstrap & AngularJS
* Build persistent and loosely coupled Web apps using Hibernate and Spring technologies
* Build RESTFull Web Services
* Build high quality Web/enterprise apps by using DevOps platform

## Learning Cycle

The Program uses a combination of Flipped Classroom, Expert Trainer interaction over the SLT Platform and Tech Mentor support for project development @ Centre.

The **flipped classroom** is an instructional model where the class room teaching and home assignment elements of a course are reversed. Short video lessons are watched by students at home before the **class** session, while **class** time is devoted for practical demos, exercises, projects, or discussions

**Student’s Daily Learning Schedule:**

Cloud Learning

Expert Trainer Session [SLT-CR]

Project Coding [MR]

Code Submission on GitHub

**Average Daily Effort**

|  |  |
| --- | --- |
| **Activity** | **Effort in Hours** |
| Cloud Learning (Videos and Reference Material) | 2 |
| SLT – CR for Coding Inputs and Doubt Clarification | 2 |
| Coding for Project and submitting on GitHub | 2 |
| **Total Student Learning Hrs/Day** | **6** |

You are expected to cover the Self Learning components of Videos and Reference Material before coming in to the SLT-CR and is to be done at home.

## Pedagogy

Project-based learning (also known as 'PBL') uses authentic, loosely structured day-wise assignments for students to solve. Students receive guidance, but not solutions from Tech-Mentors. Problem-based learning is also implemented where small problems will be given to you and once you are comfortable with coding and concepts, you can apply them in your project.

Problem based learning focuses on the problem and the process while project based learning focuses on the product.

**CODING, Design Thinking, Code Review and Refactoring are the Methodology components of the program.**

The program will focus on building coding skills and will prepare you for the Software Development jobs. During the program you are expected to spend at least 70% of your time on project work.



**Role of the Expert Faculty and Tech Mentors**

## Learning Resources

#### Reference Course Material

You are provided with the below reference books. **These books are meant for your self-learning**. You can read and understand the concepts, try the code snippets/demo solutions and practice the lab exercises to be more confident in the subject. However, all these are optional and subject to your interest levels.

Your faculty will focus on project based activity and related concepts only.

1. Programming in Java - Student Guide
2. Programming in Java - Activity Guide
3. HTML5 Programming - Student Guide
4. HTML5 Programming - Activity Guide
5. Oracle 11g: Introduction to SQL - Student Guide
6. Implementing Data Persistence Using the Hibernate Framework - Student Guide
7. Implementing Data Persistence Using the Hibernate Framework - Activity Guide
8. Building Web Applications Using the Spring Framework - Student Guide
9. Building Web Applications Using the Spring Framework - Activity Guide

***The courseware being issued as part of the program is meant for reference and use during the project as applicable. Not all objectives of the preceding courseware will be covered during the course of the program***.

#### Video Links

You are also provided with links to various videos that we recommend you view before the start of every week. Viewing the videos (multiple times if required), will help clear concepts and enable you to apply the concepts better in your projects.

#### Collaboration

You will also be able to access the NIIT Cloud Campus portal.  This portal will help you network with each participant irrespective of the location. You can access innovate cloud services, such as Discussion forum, Groups and blogs for Collaborative Learning. You will also be part of a Cloud Group specially created for your batch. You will be able to collaborate with your batch mates, Tech Mentors and Expert faculty through this group. You are welcome to post your queries and also suggest solutions to other queries.

## Project Case Studies

**Sample Case Study 1**

|  |  |  |
| --- | --- | --- |
| 1 | **Name of the Project** | **Ecommerce Portal** |
| 2 | **Objective/ Vision** | An online e-commerce site which will manage end to end display and sale of its products. Customers to buy products online. Further employees should manage products and orders. |
| 3 | **Users of the System** | 1. Administrator   B. Customer |
| 4 | **Functional Requirements** | 1. Provide role based access to system. 2. Application should be accessible over the Internet. 3. Customer to perform the following activities:    1. Browse the store to view products    2. Browse the store for hot discounted products of the day.    3. Add and remove products from an online shopping basket    4. Place a shopping order by providing delivery information 4. Provide an authentication mechanism to verify the credentials of an employee assigned with the administrator role. 5. Provide an authorization mechanism to restrict access to administrative functions based on the fact whether the current user is an administrator or not. 6. An administrator should be able to perform the following activities:    1. Add new products    2. Edit information of products.    3. Delete products.    4. View status of placed orders.    5. Update the status of an order to be delivered.    6. Mark Products as favorite    7. Display favorite products    8. Share Products with Friends 7. System should allow administrator to provide festive discounts on the total price by providing the discount information in an XML file. |
| 5 | **Non-functional requirements** | Secure access of confidential data (user’s details). |
| 6 | **Tools and Technologies to be used** | 1. **Technology**: Bootstrap, Angular JS, Spring MVC, Spring Security, Hibernate, Web Flows and RESTfull services 2. **Application Server**: Apache Tomcat Server 3. **Database**: H2 Database / Oracle Database |

**Sample Case Study 2**

|  |  |  |
| --- | --- | --- |
| 1 | **Name of the Project** | **Collaboration Portal** |
| 2 | **Objective/ Vision** | An online student collaboration portal to enable users to interact share their experience and knowledge. |
| 3 | **Users of the System** | A. Administrator  B. Student/Alumni |
| 4 | **Functional Requirements** | 1. Provide role based access to system. 2. Application should be accessible over the Internet. 3. Student to perform the following activities:    1. Browse the site to view bulletins, job opportunities, what is happening in their institute.    2. They should be able to create their profile, upload their photos, show status either as student/alumni.    3. Student can edit his profile any time.    4. Student should be able to view / search other members of the site.    5. Student should be able to join / create the chat forums, blogs    6. Student should be able to make friends with each other & chat with each other. 4. Provide an authentication mechanism to verify the credentials of an employee assigned with the administrator role. 5. Provide an authorization mechanism to restrict access to administrative functions based on the fact whether the current user is an administrator or not. 6. An administrator should be able to perform the following activities:    1. Add new items to the bulletin / job opportunities    2. Add photos of events conducted.    3. Create new chat forums & Blogs    4. Approve the blogs / chat forums created by user |
| 5 | **Non-functional requirements** | Secure access of confidential data (user’s details). |
| 6 | **Tools and Technologies to be used** | 1. Technology: Bootstrap, Angular JS, Spring MVC, Spring Security, Hibernate, Web Flows and RESTfull services 2. Application Server: Apache Tom cat Server 3. Database: H2 Database / Oracle Database | |

## Project Evaluation Guidelines

**Intermediate Level:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Assessment Type** | **Weightage** | **Parameters** | **Marks** |
| Project - 1 | 80% | Completion | 25 |
|
| Timely updation / Milestone adherence | 15 |
| Pitfalls in the code completion | 20 |
| Project Presentation & Viva | 40 |
| Course Test 1 | 20% |  | |

**Diploma Level:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Assessment Type** | **Weightage** | **Parameters** | **Marks** |
| Project - 1 | 30% | Completion | 25 |
|
| Timely updation / Milestone adherence | 15 |
| Pitfalls in the code completion | 20 |
| Project Presentation & Viva | 40 |
| Course Test 1 | 10% |  | |
| Project - 2 | 50% | Completion | 15 |
| Commenting & structring of resources | 5 |
| Timely updation / Milestone adherence | 10 |
| Pitfalls in the code completion | 20 |
| Usage of Maven Scripts for DevOps | 15 |
| Security of Application | 15 |
| Project Presentation & Viva | 20 |
| Course Test 2 | 10% |  | |

## Project Standards and Guidelines

**You need to adhere to the following standards and guidelines when creating the project:**

1. **Consistent and proper variable naming conventions need to be followed across the project.**
2. **User interface of the application needs to be user-friendly.**
3. **Variable and function names need to be meaningful, and they need to convey their use. For example, a variable to store the price of an item can be named itemPrice.**
4. **First letter of the variable name needs to be in small letters and has to specify the data type of the variable. The rest of the name needs to imply the functionality of the variable.**
5. **Comments need to be placed before the definition of each class and function to explain the functionality of the class/function.**
6. **Appropriate comments need to be placed within the code where some complex logic/algorithm is being used.**
7. **Code needs to be properly indented to provide clarity.**
8. **GitHub is used as a code repository. You need to upload your project on a daily basis. This will help maintain a backup on the cloud, also helps you manage multiple versions of the code.**
9. **Substantial change in the code would merit saving your code as a new version, so that you can retrieve earlier versions as and when required.**
10. **Your Project has been divided into various Sprints (weeks). You are expected to adhere to the deadlines indicated by your Tech Mentor /Expert Faculty.**
11. **Your Tech Mentor will be continuously evaluating you based on your progress in the various Sprints.**
12. **Though the formal schedule expects you to work 2 hrs daily on your project, you are free to put in additional hours, as and when required, to ensure timely completion of the sprint tasks.**

## Milestone [Sprint Plan]

The below table helps you to visualize and plan your project development in 14 weeks. There will be continuous monitoring by Tech mentor at centre and at times by Expert Faculty. Be prepared for the SLT CR by going through the suggested videos and reference material. Do not hesitate to raise your doubts to Tech Mentor or Expert Faculty on SLT.

Do not concentrate on only completing the task. Check and document what you have learned in the day. You will be given some additional exercises / questions to solve apart from Projects. These will enable you to become strong technically and face interviewers confidently.

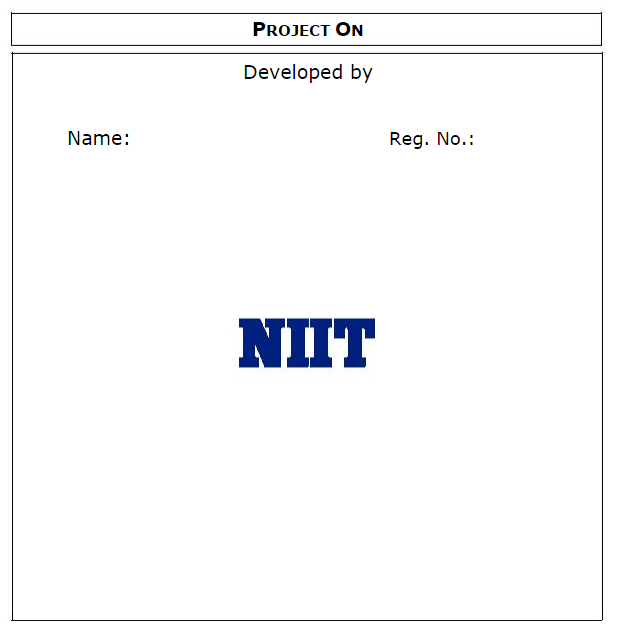
| Sprint # | Resource | Day-1 | Day-2 | Day-3 | Day-4 | Day-5 |
| --- | --- | --- | --- | --- | --- | --- |
| Sprint-0 | CL | **Cloud Learning - 0** | **Cloud Learning – 0** | **Cloud Learning - 0** | **Cloud Learning - 0** | **Cloud Learning - 0** |
| SLT-CR | Intro | Device Registration + Java - Basic Syntax, Loops, Control statements, Data types + Lab Exercises [ Java SE Programing -Activity guide :: Practices for Lesson 2] | Oracle - Retrieve Data using the SQL SELECT Statement, Restricted and Sorted Data, Display Data From Multiple Tables + Lab Exercises [Oracle SQL- Lesson 9] | Java - OO fundamentals, Inheritance, Interfaces [ Flip Class Room] | Responsive Web Design Using HTML5 & Jquery - Lab Guide - Chapter 3 |
| MR | Creates NiitStudent.com Id, gets familiar with Cloud Courseware, joins the cloud group, creates git hub id and if he brings the device.. Can down the courseware | Java - arrays , Data Strcutres, comparators + Lab Exercises [ Java SE Programing -Activity guide :: Practices for Lesson 3] | HTML5 Semantic & Structure, Validating User Input by Using HTML5 Attributes + Lab Exercises [ Responsive Web Design Using HTML5 & Jquery - Lab Guide - Chapter1 & 2] | Java SE Programing -Activity guide :: Practices for Lesson 3,4 | Responsive Web Design Using HTML5 & Jquery - Lab Guide - Chapter 3 |
| Sprint-1 | CL | **Cloud Learning - 1** | **Cloud Learning – 1** | **Cloud Learning - 1** | **Cloud Learning - 1** | **Cloud Learning - 1** |
| SLT-CR | Environment Setup - JDK,Eclipse, Tomcat and IDE | MVC (Model-View-Controller) Concept, Hello Spring Demo using Spring MVC | Build eStore website using eclipse IDE | Create object-oriented Java applications, Building Java Domain Model Object | Adding framework support , Adding Views Framework, Adding Annotations |
| MR | Environment Setup - JDK, Tomcat and IDE | Installing Bootstrap Downloading and Modifying BootStrap Template Installing Atom text editor Installing Jquery | **Project Assignment** | **Project Assignment** | **Project Assignment** |
| Sprint-2 | CL | **Cloud Learning -2** | **Cloud Learning -2** | **Cloud Learning -2** | **Cloud Learning -2** | **Cloud Learning -2** |
| SLT-CR | Binding Data Object to a DAO | Implement error handling and IO functionality, Implement navigation | Adding content to product page Adding Bootstrap Table Creating Product list Work with styles | Putting template for several view pages. Adding details page to product. Adding Request Mapping. | Work with styles & ICON Create data-centric applications using JDBC Create object-oriented Java applications Implement navigation, events and AJAX |
| MR | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** |
| Sprint-3 | CL | **Cloud Learning-3** | **Cloud Learning-3** | **Cloud Learning-3** | Work with styles, templates and composite components Map classes with the relational database tables | **Cloud Learning-3** |
| SLT-CR | ORM Provider (JPA, Hibernate, Spring Framework), What is Data Persistence Problem between with Database | Implement Hibernate with Spring framework Work with persistent objects and retrieve data from database tables Implement error handling and IO functionality | Implementing CRUD Implementing Roles and permissions Integrating Spring with Business and Presentation Layers | Adding Validation Framework Implement hibernate-validator Implement validation-api Access, convert and validate user input | Manipulate files, directories and file system Work with styles, templates and composite components Map classes with the relational database tables GUI Changes. |
| MR | How to Map Object to Relational | Installing Java Secure H2 Database Implementing H2 Database Adding Dependency | **Project Assignment** | **Project Assignment** | **Project Assignment** |
| Sprint-4 | CL | **Cloud Learning-4** | **Cloud Learning-4** | **Cloud Learning-4** | **Cloud Learning-4** | **Cloud Learning-4** |
| SLT-CR | Implement Spring Security for user authentication Configuring Spring Filters | Defining Security Authentication Manager Adding Controllers | Add and Remove product from cart Using fasterXML and Jackson | Work with persistent objects and retrieve data | Work with persistent objects and retrieve data Implement collection framework Implement error handling and IO functionality Creating Cart View Implement Spring MVC |
| MR | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** |
| Sprint-5 | CL | **Cloud Learning-5** | **Cloud Learning-5** | **Cloud Learning-5** | **Cloud Learning-5** | **Cloud Learning-5** |
| SLT-CR | Adding User Model for Spring Security Validation Adding Authority Model for Role Adding Shipping Address Model Making product class serializable Many to One Mapping Adding Entity Relationship | Designing and creating Business Flow Diagram Designing and creating ER Diagrams for eStore Register as customer accessing validation-api Adding Form view controller | Binding form with model Work with styles, templates and composite components Map classes with the relational database tables | Writing REST Service for Creating Cart View | Writing Response in JSON format HTTP Service, Adding Jackson Dependency Creating cart interface Work on persistent layer |
| MR | Spring Security Validation Adding Authority Model for Role Adding Shipping Address Model Many to One Mapping Adding Entity Relationship | Register as customer accessing validation-api Adding Form view controller | **Project Assignment** | **Project Assignment** | **Project Assignment** |
| Sprint-6 | CL | **Cloud Learning -6** | **Cloud Learning -6** | **Cloud Learning -6** | **Cloud Learning -6** | **Cloud Learning -6** |
| SLT-CR | Adding Order Controllers, Adding Order DAO as service | Adding spring-webflow dependency Creating Web flow config for flow executor  Creating Web flow config for flow Registration  Creating Web flow config for flow Location | Define Beans Checkout Flow creation Defining action state Add Web Flow Pages | Creating Web flow view and JSP Work with styles, templates and composite components Order confirmation page | Add Data Table: Work with styles, templates and composite components Adding search in data table. |
| MR | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** |
| Sprint-7 | CL | **Cloud Learning - 7** | **Cloud Learning – 7** | **Cloud Learning - 7** | **Cloud Learning - 7** | **Cloud Learning - 7** |
| SLT-CR | Common Infrastructure Servers, Scalability and Availability, Virtualization Concepts | Automated Installations and Deployments | Automated Installations and Deployments | **Use DevOps tools -Maven build Scripts for CI / Feedback** | Use DevOps tools -Maven build Scripts for CI |
| MR | **Project walk through** |  |  |  | **MTE-1** |
| Sprint-8 | CL | **Cloud Learning - 8** | **Cloud Learning – 8** | **Cloud Learning - 8** | **Cloud Learning - 8** | **Cloud Learning - 8** |
| SLT-CR | 1.      Creating Dynamic Web Project to IDE  ·         Build Collaboration website using eclipse IDE ·         Create object-oriented Java applications ·         Building Java Domain Model Object ·         Adding framework support ·         Adding Annotations | 1.      Creating Dynamic Web Project to IDE  ·         Build Collaboration website using eclipse IDE ·         Create object-oriented Java applications ·         Building Java Domain Model Object ·         Adding framework support ·         Adding Annotations | 2.      ORM (Object-Relational-Mapping) ·         What is Data Persistence ·         Problem between with Database ·         How to Map Object to Relational ·         ORM Provider (JPA, Hibernate, Spring Framework) | 2.      ORM (Object-Relational-Mapping) ·         What is Data Persistence ·         Problem between with Database ·         How to Map Object to Relational ·         ORM Provider (JPA, Hibernate, Spring Framework) | 3.       Add Database with Spring Hibernate and Java Persistence ·         Implement Hibernate with Spring framework ·         Work with persistent objects and retrieve data from database tables ·         Implement error handling and IO functionality ·         Installing Java Secure Oracle Database ·         Implementing Oracle Database |
| MR | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** |
| Sprint-9 | CL | **Cloud Learning - 9** | **Cloud Learning – 9** | **Cloud Learning - 9** | **Cloud Learning - 9** | **Cloud Learning - 9** |
| SLT-CR | 3.       Add Database with Spring Hibernate and Java Persistence ·         Implement Hibernate with Spring framework ·         Work with persistent objects and retrieve data from database tables ·         Implement error handling and IO functionality ·         Installing Java Secure Oracle Database ·         Implementing Oracle Database | 4.       Develop Add- Profile Management Functionality ·         Implementing CRUD ·         Implementing Roles and permissions ·         Integrating Spring with Business and Presentation Layers ·         Work with styles, templates and composite components ·         Map classes with the relational database tables | 4.       Develop Add- Profile Management Functionality ·         Implementing CRUD ·         Implementing Roles and permissions ·         Integrating Spring with Business and Presentation Layers ·         Work with styles, templates and composite components ·         Map classes with the relational database tables | 5.       Adding Profile Image Upload Function ·         Manipulate files, directories and file system ·         Work with styles, templates and composite components ·         Map classes with the relational database tables ·         GUI Changes. | 5.       Adding Profile Image Upload Function ·         Manipulate files, directories and file system ·         Work with styles, templates and composite components ·         Map classes with the relational database tables ·         GUI Changes. |
| MR | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** |
| Sprint-10 | CL | **Cloud Learning-10** | **Cloud Learning-10** | **Cloud Learning-10** | **Cloud Learning-10** | **Cloud Learning-10** |
| SLT-CR | 6.       Validations ·         Adding Validation Framework ·         Implement hibernate-validator ·         Implement validation-api ·         Access, convert and validate user input | 6.       Validations ·         Adding Validation Framework ·         Implement hibernate-validator ·         Implement validation-api ·         Access, convert and validate user input | 7.      Adding Different Models ·         Adding User Model for Spring Security Validation ·         Adding Authority Model for Role ·         Adding User profile model ·         Adding Blog Model ·         Adding Forum Model ·         Adding user management model ·         Adding Entity Relationship | 7.      Adding Different Models ·         Adding User Model for Spring Security Validation ·         Adding Authority Model for Role ·         Adding User profile model ·         Adding Blog Model ·         Adding Forum Model ·         Adding user management model ·         Adding Entity Relationship | 7.      Adding Different Models ·         Adding User Model for Spring Security Validation ·         Adding Authority Model for Role ·         Adding User profile model ·         Adding Blog Model ·         Adding Forum Model ·         Adding user management model ·         Adding Entity Relationship |
| MR | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** |
| Sprint-11 | CL | **Cloud Learning-11** | **Cloud Learning-11** | **Cloud Learning-11** | **Cloud Learning-11** | **Cloud Learning-11** |
| SLT-CR | 1.       Develop A welcome Page with Bootstrap  ·         Installing Bootstrap ·         Downloading and Modifying Bootstrap template ·         Installing J Query ·         Installing Angular JS | 2.      Add Different View ·         Adding view for login page ·         Adding view for Welcome page ·         Adding view for Blog page ·         Adding view for Forum page ·         Adding view for Friends List page ·         Adding view for Create a blog page ·         Adding view for Create a forum page ·         Adding view for User Profile | 2.      Add Different View ·         Adding view for login page ·         Adding view for Welcome page ·         Adding view for Blog page ·         Adding view for Forum page ·         Adding view for Friends List page ·         Adding view for Create a blog page ·         Adding view for Create a forum page ·         Adding view for User Profile | 3.      Add common Template for common Page code ·         Putting template for several view pages. ·         Adding details page to home. ·         Adding Request Mapping.  ·         Implement navigation, events and AJAX ·         Use of JSTL tag lib | 3.      Add common Template for common Page code ·         Putting template for several view pages. ·         Adding details page to home. ·         Adding Request Mapping.  ·         Implement navigation, events and AJAX ·         Use of JSTL tag lib |
| MR | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** |
| Sprint-12 | CL | **Cloud Learning -12** | **Cloud Learning -12** | **Cloud Learning -12** | **Cloud Learning -12** | **Cloud Learning -12** |
| SLT-CR | 4.      Adding Angular in views pages. ·         Understanding ng-modal and ng-controller ·         Making each functionality as single page view ·         Implement navigation, events and AJAX ·         Implement single page interface for blogs and forums. | 4.      Adding Angular in views pages. ·         Understanding ng-modal and ng-controller ·         Making each functionality as single page view ·         Implement navigation, events and AJAX ·         Implement single page interface for blogs and forums. | 1.      Spring Security ·         Implement Spring Security for user authentication ·         Configuring Spring Filters ·         Defining Security Authentication Manager ·         Adding Controllers | 2.       Forum Functionality  ·         Add and Remove Post from forum ·         Creating forums ·         Work with persistent objects and retrieve data ·         Implement collection framework ·         Implement error handling and IO functionality ·         Creating consolidating forum view | 1.       Chat Services ·         Understand web sockets ·         Creating one to one chat window interface ·         Writing Web Sockets for Creating Chat View ·         Displaying Online Friends List ·         Work on web socket session ·         One to One Mapping ·         Making chat class serializable ·         Adding Entity Relationship ·         Map classes with the relational database tables ·         Work with styles, templates and composite components |
| MR | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** | **Project Assignment** |
| Sprint-13 | CL | **Cloud Learning - 13** | **Cloud Learning – 13** | **Cloud Learning - 13** | Project Assignment-2 | **Project walk through** |
| SLT-CR | 2.      Notification Section ·         Creating friends request functionality ·         Generating Notification as receivers end. ·         Creating notification interface ·         Reading and Un-reading notification ·         Adding Views Framework | 2.      implementing Blogs ·         Add and Remove reply from Blogs ·         Creating Blogs ·         Work with persistent objects and retrieve data ·         Implement collection framework ·         Implement error handling and IO functionality ·         Creating consolidating Blogs view | 3.      Spring Web Flow Config ·         Adding spring-webflow dependency ·         Creating Web flow config for flow executor  ·         Creating Web flow config for flow Registration  ·         Creating Web flow config for flow Location ·         Define Beans ·         Checkout Flow creation ·         Defining action state ·         Add Web Flow Pages ·         Creating Web flow view and JSP ·         Work with styles, templates and composite components ·         Order confirmation page |
| MR | **Project Assignment** | **Project Assignment** | **Project Assignment** |
| Sprint-14 | CL |  |  |  |  |  |
| SLT-CR | Placement Preparation | Placement Preparation | Placement Preparation | Placement Preparation | Placement Preparation |
| MR |  |  |  |  | **MTE-2** |

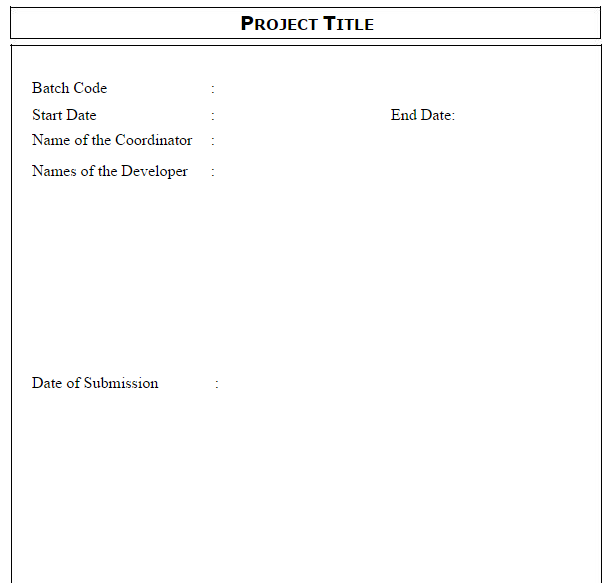
## Cloud Learning Planner

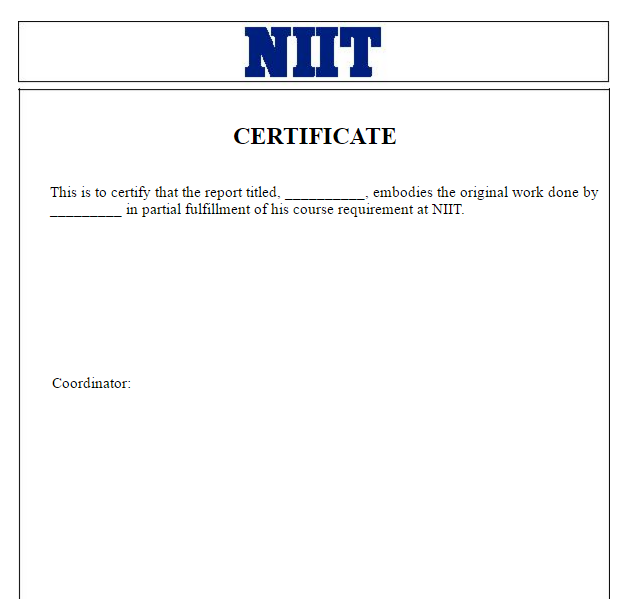
It is highly recommended that you adhere to the weekly learning plan and daily spend minimum 2 hours in cloud learning. The suggested links are to meet minimum learning requirements, before the NIIT class. You are also required to watch additional videos which may be recommended by your Tech mentor or Expert faculty from time to time.

| Week # | Video URL | Video Name |
| --- | --- | --- |
| WEEK 0 | https://www.youtube.com/watch?v=bqPIWlnjWbA&index=4&list=PL54846BE87A95E78A | Java Tutorial # 4 | Data Types and Type conversions in Java |
| WEEK 0 | https://www.youtube.com/watch?v=TL7tdNp0raE&list=PL54846BE87A95E78A&index=5 | Java Tutorial # 5 | Operators and Assignments in Java |
| WEEK 0 | https://www.youtube.com/watch?v=-oi9Pg0128M&index=6&list=PL54846BE87A95E78A | Java Tutorial # 6 | Control Statements in Java - Part 1 |
| WEEK 0 | <https://www.youtube.com/watch?v=YEbrrwH7424&index=7&list=PL54846BE87A95E78A> | Java Tutorial # 7 | Control Statements in Java - Part 2 |
| WEEK 0 | https://www.youtube.com/watch?v=wOzTAfoEovc&list=PL54846BE87A95E78A&index=8 | Java Tutorial # 8 | Arrays in Java |
| WEEK 0 | https://www.youtube.com/watch?v=NuaOvn6wd-U | Advanced OOP-Inheritance in Java |
| WEEK 0 |  |  |
| WEEK 0 | https://www.youtube.com/watch?v=0NLsJQCvKXY&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ | Oracle Database tutorials 1: How to install Oracle Database 11g on windows 7 |
| WEEK 0 | https://www.youtube.com/watch?v=0aIKyA0F4I8&index=2&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ | Oracle Database tutorials 2:How To install SQL Developer on windows 7 |
| WEEK 0 | <https://www.youtube.com/watch?v=0mnQuS_KRN0&index=3&list=PLMlNiWEoh5QqSvF_3wDxXqVA5pPTcuwZQ> | Oracle Database tutorials 3:How to enable Line numbers in SQl Developer. |
| WEEK 0 | https://www.youtube.com/watch?v=wSqoXRlXDUU&index=4&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ | Oracle Database tutorials 4: database connectivity using SQL developer and command prompt |
| WEEK 0 | https://www.youtube.com/watch?v=f\_mVBVgnqmM&index=5&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ | Oracle Database11g tutorials 5: how to retrieve Data Using SQL SELECT statement || SQL tutorials |
| WEEK 0 | https://www.youtube.com/watch?v=PYMeFe72Bas&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ&index=6 | Oracle Database11g tutorials 6 | | How to use Concatenation operator, character String |
| WEEK 0 | https://www.youtube.com/watch?v=w7dBkZ57v0g&index=8&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ | Oracle Database11g tutorials 8 || SQL DISTINCT with multiple columns |SQL Distinct with Two columns |
| WEEK 0 | https://www.youtube.com/watch?v=2uc3UcOBp5A&index=24&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ | SQL tutorial 24 :SQLJoins- Natural Join With ON and USING |
| WEEK 0 | https://www.youtube.com/watch?v=6fky1a7gFOs&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ&index=26 | SQL tutorial 26: Introduction of Joins in SQL |
| WEEK 0 | https://www.youtube.com/watch?v=aiiDEzvkMRk&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ&index=27 | SQL tutorial 27: Right Outer Join in SQL |
| WEEK 0 | https://www.youtube.com/watch?v=RihtqOtJ18U&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ&index=28 | SQL tutorial 28: Left Outer Join |
| WEEK 0 | https://www.youtube.com/watch?v=LqjCp\_eQfWE&index=29&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ | SQL tutorial 29: Full Outer Join with example |
| WEEK 0 | https://www.youtube.com/watch?v=5rx8Q4x4-qI&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ&index=10 | Oracle Database11g tutorials 10 || SQL Single Row Function (SQL Functions ) |
| WEEK 0 | https://www.youtube.com/watch?v=243Pqbta7oI&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ&index=11 | Oracle Database11g tutorials 11: SQL case manipulation functions SQL character manipulation function |
| WEEK 0 | https://www.youtube.com/watch?v=De8UvHro5UY&index=12&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ | Oracle Database11g tutorials 12 || SQL Concat Function - SQL character manipulation function |
| WEEK 0 | https://www.youtube.com/watch?v=mkmIsZarfbc | SQL with Oracle 10g XE - Using UPDATE to Change Data in a Table |
| WEEK 0 | https://www.youtube.com/watch?v=Cue47QnOf\_I&index=35&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ | SQL tutorial 35: DELETE and TRUNCATE how to delete data from a table |
| WEEK 0 | https://www.youtube.com/watch?v=uQXgqFtxI\_k&index=33&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ | SQL tutorial 33:How To Insert Data into a Table Using SQL INSERT INTO dml statement |
| WEEK 0 | https://www.youtube.com/watch?v=8yAaO\_ySTkw&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ&index=22 | SQL tutorial 22: How to Add / Delete column from an existing table using alter table |
| WEEK 0 | https://www.youtube.com/watch?v=I-LUXP9GmPU&index=15&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ | SQL tutorials 15 || How To CREATE TABLE using enterprise manager 11g |
| WEEK 0 | https://www.youtube.com/watch?v=UU0EEfpa-2c&list=PLMlNiWEoh5QqSvF\_3wDxXqVA5pPTcuwZQ&index=14 | Oracle Database11g tutorials 14 : How to CREATE TABLE using sql developer and command prompt |
| WEEK 0 | [https://www.youtube.com/watch?v=O6pO6OtojBY https://www.youtube.com/watch?v=TKLF0Aydcv4 https://www.youtube.com/watch?v=CVvJEqaq5Po](https://www.youtube.com/watch?v=O6pO6OtojBY) | Html5 Semantic Structure Elements  pattern and title Attribute of Form Field: HTML5  HTML5 tutorial- New form attributes |
| WEEK 0 | [https://www.youtube.com/watch?v=2t3ZysHg3Cc https://www.youtube.com/watch?v=Om4uhGz9HOY https://www.youtube.com/watch?v=WCMEXmZDzxw](https://www.youtube.com/watch?v=WCMEXmZDzxw) | JavaScript Tutorial 1.1: The Very Basics  Javascript Tutorial - 2 - Basic Syntax  Basic HTML Form validation using JavaScript |
| WEEK 0 | https://www.youtube.com/watch?v=ya832te-dZw https://www.youtube.com/watch?v=RdFwxoPSXL4 https://www.youtube.com/watch?v=NwUumk\_9GFQ&list=PLtNErhYMkHnFVIhieC6DfN6EJeTl8LYZm&index=2 https://www.youtube.com/watch?v=xZ\_g9TKco6Q&index=3&list=PLtNErhYMkHnFVIhieC6DfN6EJeTl8LYZm https://www.youtube.com/watch?v=Vj1PbwLopVY&list=PLtNErhYMkHnFVIhieC6DfN6EJeTl8LYZm&index=4 https://www.youtube.com/watch?v=fE6l8CnKW00&index=5&list=PLtNErhYMkHnFVIhieC6DfN6EJeTl8LYZm https://www.youtube.com/watch?v=eRcAf69IdCk | css selectors tutorial ( by element , class id ) - HTML5  CSS3 Transformations and Animations Tutorial | What You Will Learn  CSS3 Transformations and Animations Tutorial | Scaling  CSS3 Transformations and Animations Tutorial | Skewing CSS3 Transformations and Animations Tutorial | The Z-Axis CSS3 Transformations and Animations Tutorial | Advanced Animation And JavaScript Events  CSS Transitions |
| WEEK 0 | https://www.youtube.com/watch?v=v23YvJjJb2U&list=PLwIFo6ewnySWDKdFDnKWdKCQhnSHqWnfF | Git Branching - Training |
| WEEK 0 | https://www.youtube.com/watch?v=MAOt4Lgeudc&list=PLwIFo6ewnySWDKdFDnKWdKCQhnSHqWnfF | Git Introduction |
| WEEK 1 | https://www.youtube.com/watch?v=r59xYe3Vyks | Java Tutorial For Beginners 1 - Introduction and Installing the java (JDK) Step by Step Tutorial |
| WEEK 1 | https://www.youtube.com/watch?v=gzlhm0jco0g | Java Tutorial For Beginners 2 - Installing Eclipse IDE and Setting up Eclipse |
| WEEK 1 | https://www.youtube.com/watch?v=U8wrZRYAnmI | Java Tutorial For Beginners 3 - Creating First Java Project in Eclipse IDE |
| WEEK 1 | https://www.youtube.com/watch?v=pb-r8U2kpCU | How to install Java JDK on Windows 8 / Windows 8.1 |
| WEEK 1 | https://www.youtube.com/watch?v=NZ38tlhtQgw | How to Install Eclipse for Java (Windows 10) |
| WEEK 1 | <https://www.youtube.com/watch?v=oJlKos0gePQ> | Tutorial - What is bootstrap , how to use it , how to install it |
| WEEK 1 | <https://www.youtube.com/watch?v=GU6EWzBGo64> | Adding CSS and Javascript for Bootstrap |
| WEEK 1 | <https://www.youtube.com/playlist?list=PLMLdiraLeES3nKeVED3H9LTGJ2IZ1_1An&feature=iv&src_vid=De5VlKfmvXg&annotation_id=annotation_3643779499> | HTML5 and CSS3 beginners tutorial 1 - Introduction |
| WEEK 1 | <http://www.bing.com/videos/search?q=html5+tutorial&&view=detail&mid=29FB26FA915EBE9A287429FB26FA915EBE9A2874&FORM=VRDGAR> | HTML5 and CSS3 Beginner Tutorial 1 - Introduction, + downloading the  software |
| WEEK 1 | <https://www.youtube.com/playlist?list=PLMLdiraLeES3nKeVED3H9LTGJ2IZ1_1An&feature=iv&src_vid=De5VlKfmvXg&annotation_id=annotation_3643779499> | HTML5 and CSS3 beginners tutorial 1 - Introduction |
| WEEK 1 | <http://www.bing.com/videos/search?q=html5+tutorial&&view=detail&mid=29FB26FA915EBE9A287429FB26FA915EBE9A2874&FORM=VRDGAR> | HTML5 and CSS3 Beginner Tutorial 1 - Introduction, + downloading the  software |
| WEEK 1 | https://www.youtube.com/watch?v=Av6zh817QEc | Creating a Web Application with Eclipse IDE |
| WEEK 1 | https://www.youtube.com/watch?v=NlWZJtpptwc | Java Programming Tutorial:Installing Java JDK and Eclipse IDE |
| WEEK 2 | https://www.youtube.com/watch?v=zKkUN-mJtPQ | Angular JS |
| WEEK 2 | https://www.youtube.com/watch?v=0kmdjqgO9IY | Angular JS |
| WEEK 2 | https://www.youtube.com/watch?v=7LXN0MzmDsc | Angular JS |
| WEEK 2 | https://www.youtube.com/watch?v=hMxGhHNOkCU&list=PLoYCgNOIyGABdI2V8I\_SWo22tFpgh2s6\_ | JQuery10 videos |
| WEEK 2 | https://www.youtube.com/watch?v=A\_oKlQVlf0s | Spring MVC Login Form with Hibernate in Eclipse |
| WEEK 3 | https://www.youtube.com/watch?v=iCQspqBpOB0&index=1&list=PLBgMUB7xGcO31B2gBmy1igpZn6LK78-CJ | 31 videos complete tutorial |
| WEEK 3 | https://www.youtube.com/watch?v=BjNhGaZDr0Y | Spring MVC Tutorial for Beginners : Learn in 25 Steps with Annotations |
| WEEK 3 | https://www.youtube.com/watch?v=DqLxUYJ8D1E | Login Form using Spring MVC and Hibernate |
| WEEK 3 | https://www.youtube.com/watch?v=rdYQOqxq9F0 | Add, Edit, Delete, Search using Spring and Hibernate |
| WEEK 3 | https://www.youtube.com/watch?v=2prdt2byiTs | Spring Interview Questions and Answers |
| WEEK 3 | <https://www.youtube.com/watch?v=F9o-0N7tMg8> | Spring web app tutorial 18: JSP Form binding using Model Attribute : javavids |
| WEEK 3 | https://www.youtube.com/watch?v=-awY6UofVu8&list=PLwIFo6ewnySWDKdFDnKWdKCQhnSHqWnfF | Spring Java Config - getting started |
| WEEK 3 | https://www.youtube.com/watch?v=1BkvXEv65Z8 | INSTALLING AND STARTING H2 DATABASE DEMO |
| WEEK 3 | https://www.youtube.com/watch?v=ptajUIqk\_Ao | H2 database. How to use for beginners. |
| WEEK 3 | https://www.youtube.com/watch?v=0VN3Yy5rmS8&list=PLwIFo6ewnySX3xi1geQQvexbwTne4pOiF&index=9 | SpringMVC- Ajax and JSON |
| WEEK 3 | https://www.youtube.com/watch?v=pwtIedPmnY8 | Spring and Hibernate CRUD Tutorial |
| WEEK 3 | https://www.youtube.com/watch?v=oTE6ylQgngM | Setting up a JPA DAO with Spring Boot, Hibernate, and H2 |
| WEEK 3 | <https://www.youtube.com/watch?v=FFMOZY4z6bE&index=5&list=PL4AFF701184976B25> | Hibernate Tutorial 03 Part 3- Saving Objects using Hibernate APIs |
| WEEK 3 | <https://www.youtube.com/watch?v=iaSd_yK9xaw&list=PL4AFF701184976B25&index=6> | Hibernate Tutorial 04 - hbm2ddl Configuration and Name Annotations |
| WEEK 3 | <https://www.youtube.com/watch?v=I8YmYFI5D_E&index=7&list=PL4AFF701184976B25> | Hibernate Tutorial 05 - More Annotations |
| WEEK 3 | <https://www.youtube.com/watch?v=3FV1yv7fvDQ&index=8&list=PL4AFF701184976B25> | Hibernate Tutorial 06 - Retrieving Objects using session.get |
| WEEK 3 | <https://www.youtube.com/watch?v=Xuofihmkl_k&list=PL4AFF701184976B25&index=9> | Hibernate Tutorial 07 - Primary Keys |
| WEEK 3 | <https://www.youtube.com/watch?v=c2abcy0Q1a0&index=10&list=PL4AFF701184976B25> | Hibernate Tutorial 08 - Value Types and Embedding Objects |
| WEEK 3 | <https://www.youtube.com/watch?v=hofWx5_ZN9c&list=PL4AFF701184976B25&index=12> | Hibernate Tutorial 10 - Saving Collections |
| WEEK 3 | <https://www.youtube.com/watch?v=kk207HAym_I&list=PL4AFF701184976B25&index=13> | Hibernate Tutorial 11 - Configuring Collections and Adding Keys |
| WEEK 3 | <https://www.youtube.com/watch?v=Zj1mRWfhx_Y&list=PL4AFF701184976B25&index=19> | Hibernate Tutorial 17 - Implementing Inheritance |
| WEEK 3 | <https://www.youtube.com/watch?v=M5YrLtAHtOo&list=PL4AFF701184976B25&index=20> | Hibernate Tutorial 18 - Implementing Inheritance - Single Table Strategy |
| WEEK 3 | <https://www.youtube.com/watch?v=qIdM4KQOtH8&index=21&list=PL4AFF701184976B25> | Hibernate Tutorial 19 - Implementing Inheritance With Table Per Class Strategy |
| WEEK 3 | <https://www.youtube.com/watch?v=o1b3HFIlDS0&list=PL4AFF701184976B25&index=22> | Hibernate Tutorial 20 - Implementing Inheritance With Joined Strategy |
| WEEK 3 | <https://www.youtube.com/watch?v=hDBQy-dWC0A&list=PL4AFF701184976B25&index=23> | Hibernate Tutorial 21 - CRUD Operations |
| WEEK 3 | <https://www.youtube.com/watch?v=kZpRyEABnms&index=24&list=PL4AFF701184976B25> | Hibernate Tutorial 22 - Transient, Persistent and Detached Objects |
| WEEK 3 | <https://www.youtube.com/watch?v=sjZGFHEdD4M&list=PL4AFF701184976B25&index=25> | Hibernate Tutorial 23 - Understanding State Changes |
| WEEK 3 | <https://www.youtube.com/watch?v=Em4M2tUn1bU&list=PL4AFF701184976B25&index=27> | Hibernate Tutorial 25 - Introducing HQL and the Query Object |
| WEEK 3 | <https://www.youtube.com/watch?v=WVHFpp8X5z0&list=PL4AFF701184976B25&index=28> | Hibernate Tutorial 26 - Select and Pagination in HQL |
| WEEK 3 | <https://www.youtube.com/watch?v=PiahhQ0Qkak&index=29&list=PL4AFF701184976B25> | Hibernate Tutorial 27 - Understanding Parameter Binding and SQL Injection |
| WEEK 3 | <https://www.youtube.com/watch?v=4fVlAobgQGI&index=31&list=PL4AFF701184976B25> | Hibernate Tutorial 29 - Introduction to Criteria API |
| WEEK 3 | <https://www.youtube.com/watch?v=MzrzsKSJBt0&index=32&list=PL4AFF701184976B25> | Hibernate Tutorial 30 - Understanding Restrictions |
| WEEK 3 | https://www.youtube.com/watch?v=nb4kKVDc4cE | Hibernate Interview Questions |
| WEEK 4 | https://www.youtube.com/watch?v=KuI6jsWSKhk | CRUD Spring MVC Framework and Hibernate with Autowired |
| WEEK 4 | https://www.youtube.com/watch?v=oTE6ylQgngM | Setting up a JPA DAO with Spring Boot, Hibernate, and H2 |
| WEEK 5 | https://www.youtube.com/channel/UCdFttVqX3UDsia9U8mcJzUg/videos?feature=hovercard | Complete series of Spring Security topics |
| WEEK 5 | https://www.youtube.com/watch?v=hhPBhxtwqKE | Spring Security Part2 (DAO Authentication) |
| WEEK 5 | <https://www.youtube.com/watch?v=vR6jYVEMJS0> | Spring Security Basics |
| WEEK 5 | https://www.youtube.com/watch?v=HcjHJLEbtRs | Introduction To Transaction Management |
| WEEK 6 | <https://www.youtube.com/watch?v=BeK_-Um_lIQ&list=PLwIFo6ewnySX3xi1geQQvexbwTne4pOiF> | Spring-MVC Web flow |
| WEEK 6 | https://www.youtube.com/watch?v=hW2vs8dOJO4&index=2&list=PLwIFo6ewnySX3xi1geQQvexbwTne4pOiF | Spring-MVC Web flow |
| WEEK 6 | https://www.youtube.com/watch?v=25OpI0inO9o&list=PLwIFo6ewnySX3xi1geQQvexbwTne4pOiF&index=3 | Spring-MVC Web flow |
| WEEK 6 | https://www.youtube.com/watch?v=wtjgHypY9Ko&list=PLwIFo6ewnySX3xi1geQQvexbwTne4pOiF&index=4 | Spring-MVC Web flow |
| WEEK 6 | https://www.youtube.com/watch?v=SetKu8GEvKE&list=PLwIFo6ewnySX3xi1geQQvexbwTne4pOiF&index=5 | Spring-MVC Web flow |
| WEEK 6 | https://www.youtube.com/watch?v=h2gZylbWzQ8&list=PLwIFo6ewnySX3xi1geQQvexbwTne4pOiF&index=6 | Spring-MVC Web flow |
| WEEK 6 | https://www.youtube.com/watch?v=xgeLFaLYabE&index=7&list=PLwIFo6ewnySX3xi1geQQvexbwTne4pOiF | Spring-MVC Web flow |
| WEEK 6 | https://www.youtube.com/watch?v=iRq57N4frkg&list=PLwIFo6ewnySX3xi1geQQvexbwTne4pOiF&index=8 | Spring-MVC Web flow |
| WEEK 7 | https://www.youtube.com/watch?v=\_I94-tJlovg | What is DevOps? - In Simple English |
| WEEK 7 | https://www.youtube.com/watch?v=HpZBnc07q9o | Understanding DevOps by IBM employee Sanjeev sharma |
| WEEK 7 | https://www.youtube.com/watch?v=CSrKwP1QrjE | Where to start |
| WEEK 7 | https://www.youtube.com/watch?v=igwFj8PPSnw | Continuous Delivery vs. Continuous Deployment |
| WEEK 7 | https://www.youtube.com/watch?v=4E3xfR6IBII | Code Ethics |
| WEEK 7 | https://www.youtube.com/watch?v=R2lsXqmt7jQ | Understanding Common Infrastructure Servers | DevOps Tutorial for Beginners |
| WEEK 7 | https://www.youtube.com/watch?v=ONeeO9tqItM | Implement Automated Installation & Deployment | Devops Tutorial for Beginners | What is DevOps |
| WEEK 7 | https://www.youtube.com/watch?v=SoZP0fqgxUQ | What is DevOps | Why DevOps | DevOps Tutorial for Beginners |
| WEEK 7 | https://www.youtube.com/watch?v=5Mv7\_P8oz84 | The Role of Test Automation, API Testing, and Service Virtualization in DevOps |
| WEEK 7 | https://www.youtube.com/watch?v=Np5\_O43BFD4 | What is Service Virtualization? |
| WEEK 7 | https://www.youtube.com/watch?v=Gmn3zk2j7Cw | Containers, Virtualization, and Rugged DevOps |
| WEEK 7 | https://www.youtube.com/watch?v=TZimBgpGcBI | DevOps Continuous Testing - Integration Testing & Service Virtualization with IBM |
| WEEK 7 | https://www.youtube.com/watch?v=jy-LK8ore4U | 5 Best Practices in DevOps Culture | DevOps Tutorial | What is DevOps | Understanding DevOps |
| WEEK 7 | https://www.youtube.com/watch?v=ujGN4jSEqtM | BUILDING SCALABLE APPS WITH DEVOPS on IBM Bluemix |
| WEEK 7 | https://www.youtube.com/watch?v=\_9MsvXrKLGQ | Devops Training |Devops Online Training |
| WEEK 7 | https://www.youtube.com/watch?v=3BKyFY6KMgM | Building Maven Projects With IBM DevOps Services |
| WEEK 7 | https://www.youtube.com/watch?v=IaZDp919j8Y | Deploying Maven Projects To Bluemix With IBM DevOps Services |

## Sample Documentation

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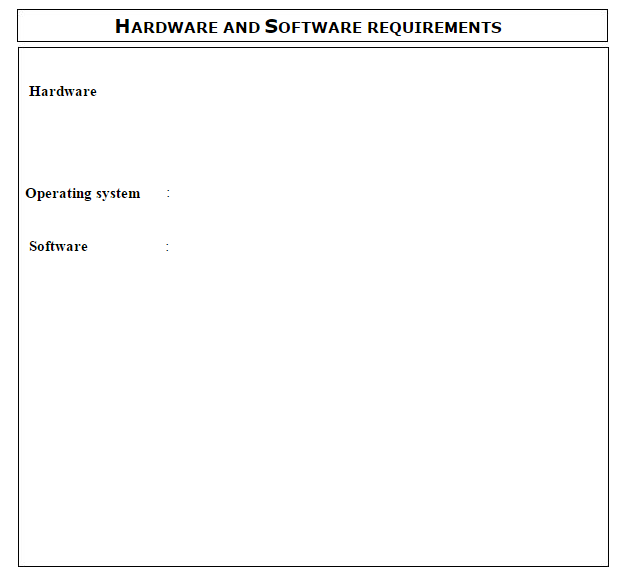
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## Annexure

In this program, the below softwares are being used. The below table indicates where you will find these softwares. NIIT will not be able to help with any softwares.

Installation steps are demonstrated in your first Week CR and also your Tech mentor can support you with installation manual.

|  |  |
| --- | --- |
| Apache Tomcat 8: Apache Tomcat 8.0.33 | <https://tomcat.apache.org/download-80.cgi> |
| Eclipse Mars: Eclipse Java EE IDE for Web Developers. Version: Mars.2 Release (4.5.2) | <https://eclipse.org/downloads/> |
| Oracle Java SDK 8: JDK 1.8.0\_73 | <http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html> |
| Notepad++ or Atom text editor. | <https://atom.io/> |
| Maven 3: Embedded 3.3.3 | <https://maven.apache.org/download.cgi> |
| H2 Database installer. (Version 1.4.191) | <http://www.h2database.com/html/download.html> |
| PDF reader. | <http://free-pdf-reader.en.softonic.com/> |
| Chrome Brower. Version 49.0. |  |

## Glossary:

**Scrum::** Scrum is the leading agile development methodology, used by Fortune 500 companies around the world. The Scrum Alliance exists to transform the way we tackle complex projects, bringing the Scrum framework and agile principles beyond software development to the broader world of work. - See more at: <https://www.scrumalliance.org/why-scrum?gclid=CITazon25cwCFQUHvAodltwLag#sthash.71QL1WYa.dpuf>

**Sprint::** A **scrum sprint** is a regular, repeatable work cycle in **scrum** methodology during which work is completed and made ready for review. **Scrum sprints** are basic units of development in the **scrum** methodology. Generally, **scrum sprints** are less than 30 days long. In our case it is 1 week.

**GitHub::** **GitHub** is a web-based Git repository hosting service. It offers all of the distributed revision control and source code management (SCM) functionality of Git as well as adding its own features. You will be made to create your login in GitHub and use it for your code repository. The GitHub Link can be made available in your resume to show case your project work with Employers.