

Modules of Centre of Excellence

1. Compute Intensive Application Package

- 1.1 DE4-230 Development Kit
- 1.2 Multi-touch LCD Module
- 1.3 8 Mega Pixel Digital Camera Package
- 1.4 Pingalab with Maya

2. Advanced Digital design Package

- 2.1 DE2 - 115
- 2.2 Servo Motor
- 2.3 HSMC Communication card
- 2.4 DE0 Nano

3. Embedded & SoC Development package

- 3.1 Veek MT2
- 3.2 DE1 - SoC MTL2 Development Board

4. Perpetual Software Tools & IP Cores

- 1 FLOATPC - Quartus II License for PC platform
- 2 IP-NIOS - Nios II Licenses
- 3 IP-FFT - FFT/ IFFT
- 4 IP-FIR - FIR Compiler
- 5 IPS-VIDEO - Video & Image Processing Suite
- 6 IP-DSPBUILDER - DSP Builder Software

1. PEGA UAP & VIRTUSA UAP

PEGA UAP

Specification

Pegasystems develops software for customer relationship management, digital process automation, and business process management. Here PEGA helps to build an application automatically without any coding skills.

Course Outline

1. System Architect Essentials Exercise Overview

- Exercise Approach
- Business use case: Assistance request
- Completing the course exercises

2. Introduction to Pega

- Introduction to Pega
- Situational Layer Cake

- Application development studios
- How to navigate the Pega Platform
- Roles on a Pega project
- Assessment: Introduction to Pega
- 3. Case Management: Designing a case life cycle**
 - Case life cycle
 - How to design a case life cycle
 - User context
 - How to update case status
 - How to add instructions to assignments
 - Assessment: Designing a case life cycle
- 4. Case Management: Setting a service level**
 - Service level agreements
 - How to add a service level to an assignment
 - How to add a service level to a case
 - How to apply service levels throughout the case life cycle
 - Assessment: Setting a service level
- 5. Case Management: Controlling the case workflow**
 - Optional actions
 - How to add optional actions to a case
 - Skipping processes and stages
 - How to skip a process or stage in a workflow
 - Parallel processing
 - How to perform processes in parallel
 - Decision points
 - How to add a decision point to a process
 - Assessment: Controlling the case workflow
- 6. Case Management: Routing work to users**
 - Routing work
 - How to route work
 - How to configure custom routing
 - Case approval configuration
 - How to configure a single level approval
 - How to configure cascading approvals
 - Assessment: Routing work to users
- 7. Case Management: Configuring a case hierarchy**
 - Introduction to configuring a case hierarchy
 - Rules and rule types
 - Rules and rulesets
 - Classes and class hierarchy
 - How to create a rule
 - How to update a rule
 - How to reuse rules through inheritance
 - Case hierarchy
 - How to enforce a dependency between case types
 - Adding a child case to a case

- Assessment: Configuring a case hierarchy
- 8. Case Management: Exercise**
 - Exercise: Configuring a case type
- 9. Data Modeling: Adding fields to a case type**
 - Introduction to adding fields to a case type
 - Data elements in Pega applications
 - How to manage properties
 - How to reference a property
 - Defining properties
 - User views
 - Configuring user views
 - Assessment: Adding fields to a case type
- 10. Data Modeling: Data in memory**
 - Introduction to data in memory
 - Data storage in memory
 - pyWorkPage
 - How to view clipboard data
 - How to use and set property values with the Clipboard
 - Assessment: Data in memory
- 11. Data Modeling: Manipulating case data**
 - Introduction to setting property values automatically
 - Data transforms
 - How to set values with data transforms
 - How to set default property values
 - Data transforms and superclassing
 - Assessment: Setting property values automatically
- 12. Data Modeling: Calculating case values**
 - Introduction to calculating case values
 - Declarative processing
 - Declare expressions
 - How to set a property value with a declare expression
 - Forward and backward chaining in declarative networks
 - Assessment: Setting property values declaratively
- 13. Data Modeling: Exercise**
 - Exercise: Designing a data model
- 14. Validation: Validating case data**
 - Introduction to validating case data
 - Methods of data validation
 - How to validate case data with controls
 - How to validate case data with validate rules
 - Validating a flow action with a validate rule
 - How to use edit validate rules
 - Assessment: Validating case data
- 15. Validation: Exercise**
 - Exercise: Configuring data validation
- 16. Information Exchange: Using the Integration Designer**

- How to visualize data with the Integration Designer
- Assessment: Managing data types with Integration Designer
- 17. Information Exchange: Creating data types**
 - Application data processing with data types
 - Create a locally sourced data type
 - Configure a data source for an existing data type
 - How to create an externally sourced data type
 - Assessment: Creating data types
- 18. Information Exchange: Managing data pages and views**
 - Data views and data pages
 - How to access on-demand data with a data page
 - How to configure data page sourcing options
 - How to save data with a data page
 - Assessment: Managing data pages and views
- 19. Information Exchange: Exercise**
 - Exercise: Configuring reference data
- 20. User Interface: Customizing user view layout**
 - Introduction to configuring a user form
 - Section rules
 - Guidelines for designing user views
 - How to configure a section
 - How to configure responsive UI behavior
 - Assessment: Customizing user view layouts
- 21. User Interface: Adding dynamic content to user views**
 - Introduction to adding dynamic content to user views
 - Dynamic UI design
 - How to configure dynamic content
 - Event processing
 - How to configure event processing
 - Assessment: Adding dynamic content to user views
- 22. User Interface: Styling an application**
 - Introduction to styling an application
 - Styling an application with skins
 - How to customize an application appearance with skins
 - Controlling application appearance with a skin
 - Assessment: Styling an application
- 23. User Interface: Exercise**
 - Exercise: Designing a user interface
- 24. Case Management: Sending correspondence**
 - Introduction to configuring and sending correspondence
 - Case communications
 - Sending an email from a case
 - How to configure correspondence rules
 - Assessment: Configuring and sending correspondence
- 25. Case Management: Exercise**
 - Exercise: Configuring and sending correspondence

26. Reporting: Creating business reports

- Introduction to creating business reports
- The role of reports
- Business and process reports
- The Report Browser
- How to create a report
- How to organize report results
- Creating a report
- Organizing report results
- Assessment: Creating business reports

27. Reporting: Optimizing report data

- Introduction to optimizing report data
- Data storage in Pega applications
- Property optimization
- Optimizing properties for reporting
- Assessment: Optimizing report data

28. Reporting: Exercise

- Exercise: Designing a business report

29. Application Development: Unit testing rules

- Introduction to unit testing rules
- Unit testing
- How to unit test a rule
- How to record a unit test for automated testing
- Assessment: Unit testing rules

30. Application Development: Delegating rules

- Introduction to delegating rule management to business users
- Business rule delegation
- How to delegate rules to business users
- Assessment: Delegating business rules

31. Application Development: Exercise

Exercise: Testing and maintaining an application

32. Capstone: Solution Build

- Exercise: SAE 8 Solution Build

List of Trainer/Visitors (PEGA UAP):

Name	Date	Purpose	Company
Mr. Mohon Kumar	30.01.2019	Exam	Pega System
Sandhya Ganapavaram	12.11.2018	Scrum training	Pega System
Srisailam Kodem	13.07.2018	PEGA Proctor	Pega System

Dhilleswar	10.07.2018	CSA preparation session	Talent Sprint
Ms. Meenakshi	28.06.2018	Visit	Talent Sprint
Janakiraman	28.06.2019	Visit	Talent Sprint
Dhilleswar	28.06.2018	Visit	Talent Sprint

A brief description of Major instruments/Softwares

- i) Processor: INTEL Core i5 - 55 Nos.
- ii) RAM : 8 GB
- iii) Hard Disk: 512 GB
- iv) OS: Windows 10
- v) Pegasystem Anywhere, SB Browser, VM Ware, Eclipse

Week #	Day #	MODULE	TOPICS COVERED	DURATIO N(Hrs.)
Week 1	1	SE -UML	SDLC Overview, Models & Modeling	09:00
	2	SE -UML	UML Diagram	09:00
	3	SQL	RDBMS Fundamentals , Normal Forms & introduction to Oracle	09:00
	4	SQL	Data Retrieval , Restriction and Sorting, Single row functions , Multiple row & Group Functions	09:00
	5	SQL	Join ,Sub queries & Set operators, Correlated Sub queries DDL,DCL DML & TCL	09:00
Week 2	6	SQL	Other Schema Objects - views, Index & synonyms	09:00
	7	PLSQL	Introduction to PLSQL & Language Features	09:00
	8	PLSQL	Control Structures , Sub Programs & Cursor	09:00
	9	PLSQL	Packages , Exception & performance tuning	09:00
	10	Core Java	OOPS, Java Introduction & Language Fundamentals	09:00
Week 3	11	Core Java	Introduction to Java API, Strings	09:00
	12	Core Java	Inheritance & Polymorphism	09:00
	13	Core Java Abstract Class , Interfaces & Exception		

		Handling09:00		
	14	Core Java	IO Streams	09:00
	15	Core Java	Collection FrameWork & Generics In Java	09:00
Week 4	16	Core Java	Mulit-threading	09:00
	17	Core Java	Comparing Java Version 7 and 8.0, Introduction to 8.0	09:00
	18	Core Java - JDBC	Developing Applications for the Java™ SE Platform - JDBC	09:00
	19	Core Java	Apache Commons & Google Guava +Cache+4. Coding style best practices	09:00
	20	Unit Testing	Unit Testing with Junit	09:00
Week 5	21	Unit Testing	Mockito with Junit	09:00
	22	HTML 5	HTML, Introduction to building a web page, Creating HTML Documents	09:00
	23	CSS	Intro to CSS, Adding images, More CSS techniques,	09:00
	24	CSS	Organizing information with tables and definition lists, creating layouts	09:00
	25	JavaScript	JavaScript Basics	09:00
Week 6	26	Project Work		09:00
	27	Project Work		09:00
	28	Project Work		09:00
	29	Project Work		09:00
	30	Project Work09:00		

VIRTUSA UAP

VIRTUSA UAP

Specification

In the Virtusa Java Enterprise CoE, training is provided to the students on core and advanced Java (including frameworks like Spring MVC and Spring Boot) and Angular JS. It aims to hone, engage and incubate talent to bridge the Academia-Industry requirements. This provides the students with an opportunity to be trained on additional technologies to be industry ready while still being at the campus with the benefit of industry certifications paving their way to success.

Training Outline

A brief description of Major instruments/Softwares (Lab-10)

- i) Processor: INTEL Core i5 - 55 Nos.
- ii) RAM : 8 GB
- iii) Hard Disk: 512 GB
- iv) OS: Windows 10
- v) SB Browser, VM Ware, Eclipse

Technology transfer