Camunda BMP Developer

Course outline

Module 1: Introduction to Camunda BPM

Module 1 of the Camunda BPM Developer course provides an introduction to the Camunda BPM platform. It covers the fundamentals of the platform, including its architecture, components, and features. It also provides an overview of the development process and how to use the Camunda Modeler to create process models. Finally, it introduces the Camunda Cockpit and Tasklist for monitoring and managing processes.

Lessons

- Overview of Camunda BPM
- Camunda BPM Architecture
- Camunda BPM Process Modeling
- Camunda BPM Process Execution
- Camunda BPM Process Monitoring
- Camunda BPM Process Optimization
- Camunda BPM Process Automation
- Camunda BPM Process Integration
- Camunda BPM Process Security
- Camunda BPM Process Testing

After completing this module, students will be able to:

- Understand the fundamentals of Camunda BPM and its architecture.
- Develop and deploy process applications using Camunda BPM.
- Utilize the Camunda BPM toolkit to create and manage process models.
- Integrate Camunda BPM with other systems and technologies.

Module 2: Camunda BPM Architecture

Module 2 of the Camunda BPM Developer course provides an overview of the Camunda BPM architecture. It covers topics such as the Camunda BPM engine, the Camunda BPM platform, and the Camunda BPM web applications. It also provides an introduction to the Camunda BPM API and how to use it to develop custom applications. Finally, it covers the Camunda BPM deployment process and how to configure and deploy Camunda BPM applications.

Lessons

- Introduction to Camunda BPM Architecture
- Understanding the Camunda BPM Platform
- Exploring the Camunda BPM Engine
- Working with Camunda BPM Processes
- Developing Camunda BPM Applications
- Deploying and Managing Camunda BPM Applications
- Integrating Camunda BPM with External Systems
- Troubleshooting Camunda BPM Applications
- Best Practices for Camunda BPM Development
- Advanced Topics in Camunda BPM Architecture

After completing this module, students will be able to:

- Understand the fundamentals of Camunda BPM architecture and its components.
- Develop an understanding of the Camunda BPM process engine and its capabilities.
- Learn how to design and implement a Camunda BPM process.
- Utilize the Camunda BPM process engine to create and deploy process applications.

Module 3: Camunda BPM Process Modeling

Module 3 of the Camunda BPM Developer course provides an introduction to process modeling with Camunda BPM. It covers the fundamentals of process modeling, including the different types of models, the elements of a process model, and how to create a process model in Camunda BPM. It also covers how to use the Camunda Modeler to create and edit process models. Finally, it provides an overview of the Camunda BPM Process Engine and how to deploy and execute process models.

Lessons

- Introduction to Camunda BPM Process Modeling
- Understanding the Camunda BPM Process Modeling Language
- Creating a Process Model in Camunda BPM
- Working with Gateways and Events in Camunda BPM
- Working with Tasks and Forms in Camunda BPM
- Working with Data and Variables in Camunda BPM
- Working with Sub-Processes in Camunda BPM
- Working with Rules and Decisions in Camunda BPM
- Working with Connectors in Camunda BPM
- Working with External Services in Camunda BPM
- Working with Timers in Camunda BPM
- Working with Multi-Instance Tasks in Camunda BPM
- Working with Human Tasks in Camunda BPM
- Working with User Tasks in Camunda BPM
- Working with Service Tasks in Camunda BPM
- Working with Business Rules in Camunda BPM
- Working with Script Tasks in Camunda BPM
- Working with Call Activities in Camunda BPM
- Working with Event Sub-Processes in Camunda BPM
- Working with Message Events in Camunda BPM

- Working with Error Events in Camunda BPM
- Working with Compensation Events in Camunda BPM
- Working with Signals in Camunda BPM
- Working with Message Correlation in Camunda BPM
- Working with Process Versioning in Camunda BPM
- Working with Process Instance Migration in Camunda BPM
- Working with Process Instance Modification in Camunda BPM
- Working with Process Instance Suspension in Camunda BPM
- Working with Process Instance Termination in Camunda BPM
- Working with Process Instance Migration in Camunda BPM

After completing this module, students will be able to:

- Understand the fundamentals of Camunda BPM process modeling and how to create process models using the Camunda Modeler.
- Develop process models that are compliant with the BPMN 2.0 standard.
- Utilize the Camunda Modeler to create process models with gateways, events, activities, and more.
- Deploy process models to the Camunda Engine and test them using the Camunda Cockpit.

Module 4: Camunda BPM Process Execution

Module 4 of the Camunda BPM Developer course focuses on the execution of Camunda BPM processes. It covers topics such as process execution, process variables, process events, and process tasks. It also provides hands-on exercises to help developers gain a better understanding of how to use Camunda BPM to create and execute processes.

Lessons

- Introduction to Camunda BPM Process Execution
- Understanding the Camunda BPM Process Execution Model
- Working with Camunda BPM Process Execution APIs
- Debugging and Troubleshooting Camunda BPM Process Execution
- Optimizing Camunda BPM Process Execution Performance
- Integrating Camunda BPM Process Execution with External Systems
- Securing Camunda BPM Process Execution
- Deploying and Managing Camunda BPM Process Execution
- Best Practices for Camunda BPM Process Execution

After completing this module, students will be able to:

- Understand the fundamentals of Camunda BPMN process execution
- Develop and deploy Camunda BPMN process models
- Utilize the Camunda BPMN process engine to execute process models
- Monitor and analyze process execution using Camunda Cockpit and Camunda Tasklist

Module 5: Camunda BPM Process Monitoring

Module 5 of the Camunda BPM Developer course focuses on process monitoring. It covers topics such as setting up monitoring dashboards, creating custom metrics, and using the Camunda Cockpit to monitor and analyze process performance. Additionally, the module covers how to use the Camunda Optimize tool to gain insights into process performance and identify areas for improvement.

Lessons

- Introduction to Camunda BPM Process Monitoring
- Understanding the Camunda BPM Process Monitoring Architecture
- Configuring Camunda BPM Process Monitoring
- Monitoring Camunda BPM Processes
- Analyzing Camunda BPM Process Performance
- Troubleshooting Camunda BPM Processes
- Best Practices for Camunda BPM Process Monitoring
- Integrating Camunda BPM Process Monitoring with Third-Party Tools
- Automating Camunda BPM Process Monitoring
- Advanced Topics in Camunda BPM Process Monitoring

After completing this module, students will be able to:

- Understand the fundamentals of Camunda BPM process monitoring
- Develop an understanding of the Camunda BPM process monitoring architecture
- Utilize the Camunda BPM process monitoring tools to monitor and analyze process performance
- Implement best practices for process monitoring and optimization in Camunda BPM

Module 6: Camunda BPM Process Optimization

Module 6 of the Camunda BPM Developer course focuses on process optimization. It covers topics such as process analysis, process improvement, and process automation. It also provides an introduction to the Camunda BPM platform and how to use it to optimize processes. The module also covers best practices for process optimization and how to use the Camunda BPM platform to achieve maximum efficiency.

Lessons

- Introduction to Camunda BPM Process Optimization
- Understanding the Benefits of Process Optimization
- Analyzing Process Performance and Identifying Bottlenecks
- Designing Processes for Optimal Performance
- Automating Process Optimization
- Implementing Process Optimization Strategies
- Monitoring and Evaluating Process Performance
- Troubleshooting Process Performance Issues
- Best Practices for Process Optimization
- Advanced Process Optimization Techniques

After completing this module, students will be able to:

- Understand the fundamentals of Camunda BPM process optimization
- Identify and apply best practices for process optimization
- Utilize Camunda BPM tools to analyze and optimize processes
- Develop strategies to improve process performance and reduce costs

Module 7: Camunda BPM Process Automation

Module 7 of the Camunda BPM Developer course focuses on process automation. It covers topics such as creating and managing process models, automating processes, and integrating with external systems. It also covers advanced topics such as process optimization, monitoring, and troubleshooting. This module provides a comprehensive overview of the Camunda BPM platform and its capabilities for process automation.

Lessons

- Introduction to Camunda BPM Process Automation
- Understanding the Camunda BPM Process Model
- Developing Processes with Camunda BPM
- Working with Camunda BPM Process Variables
- Working with Camunda BPM Process Events
- Working with Camunda BPM Process Gateways
- Working with Camunda BPM Process Tasks
- Working with Camunda BPM Process Forms
- Working with Camunda BPM Process Rules
- Working with Camunda BPM Process Timers
- Working with Camunda BPM Process Services
- Working with Camunda BPM Process Data
- Working with Camunda BPM Process Reports
- Working with Camunda BPM Process Optimization
- Working with Camunda BPM Process Security
- Working with Camunda BPM Process Deployment
- Working with Camunda BPM Process Monitoring
- Troubleshooting Camunda BPM Processes
- Best Practices for Camunda BPM Process Automation
- Advanced Topics in Camunda BPM Process Automation

After completing this module, students will be able to:

- Understand the fundamentals of Camunda BPMN process automation
- Design and implement process automation solutions using Camunda BPMN
- Utilize Camunda BPMN to create and deploy process automation solutions
- Troubleshoot and debug process automation solutions using Camunda BPMN

Module 8: Camunda BPM Process Integration

Module 8 of the Camunda BPM Developer course focuses on integrating Camunda BPM processes into existing systems. It covers topics such as connecting to external systems, using REST APIs, and using

the Camunda External Task Client. It also covers advanced topics such as using the Camunda Modeler to create custom process models and integrating Camunda BPM with other technologies such as Java, JavaScript, and Node.js.

Lessons

- Introduction to Camunda BPM Process Integration
- Understanding the Camunda BPM Process Integration Architecture
- Configuring Camunda BPM Process Integration
- Developing Camunda BPM Process Integration Applications
- Integrating Camunda BPM Process Integration with External Systems
- Troubleshooting Camunda BPM Process Integration
- Best Practices for Camunda BPM Process Integration
- Advanced Topics in Camunda BPM Process Integration
- Security Considerations for Camunda BPM Process Integration
- Deploying Camunda BPM Process Integration Applications

After completing this module, students will be able to:

- Understand the fundamentals of Camunda BPM process integration
- Develop and deploy Camunda BPM process applications
- Integrate Camunda BPM process applications with external systems
- Monitor and troubleshoot Camunda BPM process applications

Module 9: Camunda BPM Process Security

Module 9 of the Camunda BPM Developer course covers the fundamentals of process security in Camunda BPM. It covers topics such as authentication, authorization, and user management, as well as how to secure process instances and data. It also covers how to use the Camunda BPM Security API to secure process instances and data.

Lessons

- Introduction to Camunda BPM Process Security
- Understanding Authentication and Authorization
- Configuring Authentication and Authorization
- Securing Process Variables
- Securing Process Instances
- Securing Process Definitions
- Securing External Resources
- Implementing Security Policies
- Troubleshooting Security Issues
- Best Practices for Camunda BPM Process Security

After completing this module, students will be able to:

- Understand the security concepts of Camunda BPM and how to apply them to a process

- Implement authentication and authorization for Camunda BPM processes
- Configure and manage user roles and permissions
- Utilize Camunda BPM security features to protect process data and resources

Module 10: Camunda BPM Process Testing

Module 10 of the Camunda BPM Developer course focuses on process testing. It covers topics such as setting up a test environment, writing unit tests, and debugging process models. It also covers techniques for testing process models, including using the Camunda Modeler and Camunda Cockpit. Finally, it provides an overview of the Camunda Test Framework and how to use it to automate process testing.

Lessons

- Overview of Camunda BPM Process Testing
- Writing Unit Tests for Camunda BPM Processes
- Automating Camunda BPM Process Tests
- Debugging Camunda BPM Process Tests
- Best Practices for Camunda BPM Process Testing
- Troubleshooting Camunda BPM Process Tests
- Integrating Camunda BPM Process Tests with CI/CD
- Performance Testing of Camunda BPM Processes
- Security Testing of Camunda BPM Processes
- Testing Camunda BPM Processes with External Systems

After completing this module, students will be able to:

- Understand the fundamentals of Camunda BPM process testing
- Develop test cases for Camunda BPM processes
- Utilize Camunda BPM process testing tools to validate process models
- Troubleshoot and debug Camunda BPM process models for errors and inconsistencies

Module 11: Camunda BPM Process Deployment

Module 11 of the Camunda BPM Developer course covers the process of deploying a Camunda BPM process. It covers topics such as creating a deployment descriptor, deploying a process to the Camunda engine, and troubleshooting deployment issues. Additionally, the module covers how to use the Camunda Cockpit to monitor and manage deployed processes.

Lessons

- Overview of Camunda BPM Process Deployment
- Understanding the Camunda BPM Process Deployment Architecture
- Configuring Camunda BPM Process Deployment
- Deploying Camunda BPM Processes
- Troubleshooting Camunda BPM Process Deployment
- Best Practices for Camunda BPM Process Deployment
- Automating Camunda BPM Process Deployment

- Security Considerations for Camunda BPM Process Deployment
- Monitoring Camunda BPM Process Deployment
- Optimizing Camunda BPM Process Deployment Performance

After completing this module, students will be able to:

- Understand the fundamentals of Camunda BPM process deployment
- Develop and deploy Camunda BPM processes using the Camunda Modeler
- Utilize the Camunda Cockpit to monitor and manage deployed processes
- Troubleshoot and debug deployed processes using the Camunda Tasklist and Camunda Admin Console

Module 12: Camunda BPM Process Troubleshooting

Module 12 of the Camunda BPM Developer course provides an in-depth look at troubleshooting processes in Camunda BPM. It covers topics such as debugging, logging, and analyzing process execution, as well as best practices for troubleshooting. It also provides an overview of the Camunda Cockpit and how it can be used to monitor and troubleshoot processes.

Lessons

- Identifying and Resolving Common Process Issues
- Debugging Processes with Camunda Cockpit
- Troubleshooting Process Performance Issues
- Analyzing Process Execution Logs
- Troubleshooting Process Variables
- Troubleshooting Process Instance Lifecycle Issues
- Troubleshooting Process Modeling Issues
- Troubleshooting Process Deployment Issues
- Troubleshooting Process Security Issues
- Troubleshooting Process Integration Issues

After completing this module, students will be able to:

- Understand the fundamentals of troubleshooting Camunda BPM processes.
- Identify and resolve common issues with Camunda BPM processes.
- Utilize the Camunda BPM process engine logs to diagnose and fix problems.
- Develop strategies for debugging and optimizing Camunda BPM processes.

Module 13: Camunda BPM Process Best Practices

Module 13 of the Camunda BPM Developer course provides an overview of best practices for developing and deploying Camunda BPM processes. It covers topics such as process design, process optimization, process testing, and process deployment. It also provides guidance on how to use the Camunda BPM platform to its fullest potential.

Lessons

- Understanding the Camunda BPM Process Model
- Designing a Robust Camunda BPM Process
- Implementing a Camunda BPM Process
- Testing and Debugging a Camunda BPM Process
- Optimizing a Camunda BPM Process
- Troubleshooting Common Camunda BPM Process Issues
- Integrating Camunda BPM Processes with External Systems
- Securing a Camunda BPM Process
- Monitoring and Analyzing Camunda BPM Process Performance
- Automating Camunda BPM Processes with Scripts and APIs

After completing this module, students will be able to:

- Understand the fundamentals of Camunda BPM process best practices
- Develop an understanding of how to design and implement Camunda BPM processes
- Utilize Camunda BPM process best practices to optimize process performance
- Implement Camunda BPM process best practices to ensure process compliance with industry standards.