



® Aptech Learning Darbhanga

1st Floor, Captain Complex, Near Naka 5

Darbhanga, Bihar, Pin - 846004.

M: +91-7061605941, 8420092738

E: aptechdarbhanga@center@gmail.com

admission@aptechdarbhanga.com

www.aptechdarbhanga.com

| ACWD (OV-5004) | | | | |
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| Duration: | 14 Months* | Fee: | LUMP SUM | INSTALLMENT |
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| Eligibility: | 10 th /Undergraduates/ Graduates / working professionals | | | |
| Job opportunities: | On successfully completing the ACWD Pro course, you will be ready to join top national & international companies as: <ul style="list-style-type: none">➤ HTML5 programmer➤ PHP programmer➤ Web Application Developer➤ Java Programmer➤ Android application developer | | | |
| Evaluation Strategy: | Award of Grades | | | |
| | PASS | CREDIT | DISTINCTION | |
| | Overall Weighted Marks >= 40% but < 60% qualifies for PASS | Overall Weighted Marks >= 60% but < 75% qualifies for CREDIT | Overall Weighted Marks >= 75% but < 60% qualifies for DISTINCTION | |
| | Note: To attain a PASS/CREDIT/DISTINCTION grade, a student should achieve at least 40% in Final Examination; otherwise he/she will be declared as ‘Referred’. | | | |
| Learner’s Guide (eBook) | Course Content | | | |
| | Building Next Generation Web Sites | | Bootstrap and JQuery | |
| | <ol style="list-style-type: none">1. List the uses of HTML2. Describe the structure of a HTML document3. Understand the working of CSS4. Describe the various JavaScript elements5. Create HTML documents6. Understand HTML element markup7. Describe working with sections, tables, forms, and input validation8. Explain CSS Selectors9. Use borders and backgrounds10. Create layouts and styles11. Implement transitions, animations and transforms12. Explain other CSS properties and features13. Explain DOM14. Work with the Window object15. Work with DOM Elements16. Work with Events17. Use the Element-Specific Objects18. Explain the basics of jQuery and its usage with Bootstrap19. Explain the Canvas20. Use drag and drop21. Use Geolocation22. Use Web Storage23. Create offline applications | | <ol style="list-style-type: none">1. Learn basics of Bootstrap and set up Bootstrap2. Work with Plug-ins, templates and programming in Bootstrap3. Learn jQuery4. Understand Selectors, functions, widgets in jQuery5. Learn the Responsive Web layout in Bootstrap6. Learn Headers and classes in Bootstrap7. Build Webpages using Bootstrap and jQuery | |


UI/UX for Responsive Design

1. Define User Interface (UI) and User Interface design
2. List and explain the different elements of User Interface Design
3. Describe the principles of User Interface Design
4. Describe the types of User Interface Design
5. Explain the User Interface Design process
6. Describe the models in User Interface Design
7. Define User Experience (UX) and User Experience Design
8. Describe the difference between UI and UX
9. Describe the different elements of UX Design
10. Explain the significance of UX
11. List and explain the principles of User Experience Design
12. Describe the best practices in User Experience Design
13. Define Responsive UI design
14. Describe the evolution of RWD
15. Describe the importance of Progressive Enhancement
16. Outline the differences between Graceful Degradation and Progressive Enhancement
17. Explain the RWD Workflow
18. Describe the significance of RWD
19. Explain the strategies for RWD in mobile phones, Android based devices, and laptops
20. Describe the need for content strategy in RWD
21. Describe the importance of content audit
22. Explain the performance optimization for a mobile-friendly site
23. Explain the difference between responsive and adaptive Website designs
24. Define Breakpoints
25. Describe Navigation Drawers
26. Describe Stacked Pagination
27. Explain Fluid Images
28. Define Bottom Bar
29. Describe Top Bar
30. Define Front Action Calls
31. Explain Short and Simple Menus
32. Describe usability studies
33. Explain the importance of usability studies
34. List the steps for testing in usability studies
35. Describe usability studies for Responsive Web Design

Querying with MySQL

1. List the features of MySQL.
2. State the advantages of MySQL over other RDBMS.
3. Compare MySQL with other RDBMS.
4. State the advantages of PHP in MySQL.
5. Explain open source software licenses.
6. Explain the various distribution options of MySQL.
7. Explain the installation process of MySQL on Microsoft Windows.
8. Explain the installation process of MySQL on Red Hat Enterprise Linux.
9. Explain the configuration process of MySQL using Scripts.
10. Explain initialization of MySQL at startup.
11. Explain database.
12. Explain the data types.
13. Identify the different types of data.
14. Explain the creation of a table.
15. Explain Normalization.
16. Identify the different forms of normalization.
17. Explain Indexes and Referential Integrity.
18. Describe the commands to view and alter a database.
19. Explain the commands to retrieve data from a table.
20. Describe the commands to modify the table definitions.
21. Describe the commands to delete the table definitions.
22. Explain the use of keys in a table
23. Explain the use of indexes in a table
24. Explain modification of tables
25. Explain the use of the ORDER BY command
26. Explain the use of the GROUP BY command
27. Explain the different types of table joins in MySQL
28. Explain the use of Equi-Join
29. Explain the use of Inner Join
30. Explain the use of Outer-Join
31. Explain the use of Self-Join
32. Explain the use of multiple SELECT queries in a single SELECT query
33. Explain the use of UNION with the query
34. Use the functions in MySQL.
35. Describe the use of System Information functions in MySQL.
36. Describe the creation of user accounts in MySQL.
37. Identify the privileges in MySQL.
38. Explain the privileges present in MySQL.
39. Explain the commands for setting up of restrictions in MySQL.
40. Describe the new features and enhancements added to MySQL 5.7.
41. Explain Geospatial data and how to use it in MySQL.
42. List and describe spatial data types in MySQL.
43. Identify JSON Data types.
44. Describe Stored Procedures.
45. Explain transactions and how to handle them.
46. Explain the impact of transactions on performance.
47. Describe MySQL support for different languages and timezone.
48. Describe Performance Optimization.
49. Describe Query related functions.
50. Explain capability of MySQL for scaling and availability.
51. Explain how to perform data management using replication.
52. Describe concepts of partitioning in MySQL.
53. Describe concepts of Storage Systems and Management.

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| | Dynamic Website Development using PHP <ol style="list-style-type: none"> 1. Understand the need and history of PHP 2. Configure PHP 7 3. Learn the new features of PHP 7 4. Use Form Handling in PHP 5. Use Variables and Expressions in PHP 6. Use various types of operators in PHP 7. Use conditional and flow control statements in PHP 8. Use functions in PHP 9. Create and use arrays in PHP 10. Describe usage of scalar type declarations in PHP programs 11. Describe usage of anonymous classes in PHP programs. 12. Implement database management in PHP 13. Use cookies in PHP 14. Perform session management in PHP 15. Manage e-mails using PHP 16. Explain OOPS concepts 17. Explain generators and generator return expressions 18. Configure PHP 7.0.4 19. Explain exception handling and changes in exceptions in PHP 7 | Laravel Framework for Web Applications with PHP <ol style="list-style-type: none"> 1. Describe the Laravel framework 2. Describe the need for frameworks 3. Describe the features of Laravel 4. View the Laravel Directory structure 5. Create a simple Web application using fundamentals of Laravel. 6. Understand how to use Routes to serve different Web pages. 7. Learn how Views can enhance presentation of an application. 8. Use the Blade Templating Engine. 9. Describe the functionalities offered by Eloquent Object Relational Mapping (ORM) |
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| | Optimize Web for Search Engines <ol style="list-style-type: none"> 1. Define the Internet and different terminologies related to it 2. Explain the various parts of a browser 3. Describe the terms Web Address, Web pages, and Web site 4. Define and describe search engines 5. Explain the Google search engine 6. Describe various search techniques and strategies 7. Describe advanced search techniques 8. Describe Google search preferences 9. Describe the different types of Google search 10. Explain the working of Google search engine 11. Define and describe SEO 12. Explain the roles and responsibilities of SEO Consultant 13. List the Google Webmaster guidelines for SEO 14. Explain the basic techniques used to implement SEO 15. Explain the process of submitting pages to Google 16. List the causes for sites not performing well in search 17. Explain on-page optimization and its need in SEO 18. Describe different techniques for achieving on-page optimization 19. Explain the importance of keywords while developing Web site 20. Explain the selection of keywords on the Web pages 21. Explain the optimization of site structure 22. Explain the significance of developing quality content 23. Explain the navigation structure for a Web site 24. Explain the optimization of essential files such as robots.txt and sitemap.xml 25. Describe off-page optimization techniques 26. Explain different off-page optimization services 27. List the guidelines for common off-page SEO mistakes 28. Describe SEO localization 29. Describe SEO internationalization 30. Describe Social Media Optimization 31. Describe the need for Search Engine Optimization (SEO) tools 32. Describe various SEO tools and their functions 33. Compare various SEO tools 34. Explain how to analyze using different Google Optimization tools 35. Describe the usage of various Google SEO tools 36. Describe search engine marketing 37. Compare types of search engine marketing 38. Explain Google affiliate programs 39. Compare Google AdWords and AdSense 40. Explain search engine marketing strategies 41. Explain mobile SEO 42. Explain the technologies and tools used for development of mobile sites 43. Explain mobile Sitemaps 44. List the best practices for mobile SEO | |

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| | Project- PHP Web Application Development | |
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| | Fundamentals of Java | Object oriented Programming with Java |
| | <ol style="list-style-type: none">1. Develop classes and how declare classes2. Create a Java class3. Understand the benefits of using an IDE4. Declare and initialize variables5. List and understand the different data types6. Understand the major operators7. Understand the use of decision making and loop constructs8. Work with Arrays and String classes9. Understand the use of packages and access specifiers10. Use inheritance to declare and define a subclass for a superclass11. Understand nested class12. Describe error handling in a Java program13. Explain the new Date and Time API14. Explain the Functional programming features of Java 815. Explain the new Features of Java | <ol style="list-style-type: none">1. Explain Exceptions and Assertions2. Implement Java I/O operations3. Explain on how to build database applications with JDBC4. Describe Thread implementation in Java5. Explain the role of Lambdas in refactoring Java6. Explain Swing API7. Describe Concurrency and Parallelism in Java8. Define Class Design9. Describe Java Data Structures10. Understand Java Logging API and ResourceBundle11. Explain JavaDoc12. Describe how to work with Lambda |
| | Modern Android Apps Development | |
| <ol style="list-style-type: none">1. Identify different techniques to plan, design and prototype your mobile apps before writing any code2. Understand the App life cycle and its main components3. Learn to create a graphical user interface (GUI)4. Learn to implement a custom application theme5. Implement menu-based navigation6. Design and build a functional Android application7. Set up and understand your Android Development Environment8. Learn to program with Android 9 (Pie) and Notifications9. Implement display cutouts | | |
| Soft Skills | Project - Android App Development | |
| <ol style="list-style-type: none">1. Learn Sales and Marketing Skills2. Learn Presentation Skills3. Learn Interpersonal Skills4. Learn Organizational Skills5. Learn to communicate effectively | | |
| Documents Required: | <ol style="list-style-type: none">1. All educational certificates2. Age proof3. Residential address proof (Permanent and Current)4. Two Passport size Photograph |  |
| Pay your fee Offline as well as Online, For Online Payment Scan QR Code | | |