Table of Contents

Table of Contents i

Part 1: Introduction to ColdFusion 1

- **Static pages vs. Dynamic pages** 2
- **Server-side Web Technologies** 3
- **Database Alphabet Soup: ODBC/JDBC, DSNs and SQL** 3
- **Course Objectives and Prerequisites** 4
- **Introduction to Course Project** 4

Part 2: ColdFusion Basics 7

- **Using CFML** 7
- **Code Editors – Dreamweaver vs. HomeSite+** 7
  - Dreamweaver CS3 Interface 8
  - Arguments for use of Dreamweaver 8
- **HomeSite+ / ColdFusion Studio Interface** 9
  - Arguments for use of HomeSite+ / ColdFusion Studio 10
  - Tag Editing Dialog Boxes 10
- **Embedded Tag Help** 11
  - <hr> help window in HomeSite+ 12
  - <hr> help window in Dreamweaver 12
- **Using ColdFusion Comments** 13
- **Creating Variables** 13
  - <cfset> and <cfoutput> 13
- **Variable Scope/Prefixes** 14
- **Built-in ColdFusion Functions** 16
  - Insert Expression (HomeSite+ / ColdFusion Studio specific) 17
  - CF Function Reference (Dreamweaver specific) 17
  - Online Reference (http://livedocs.adobe.com) 18
- **Demo: Built-in Functions** 18
- **Demo: Date / Time Functions** 20
- **Using <cfinclude> to reuse code** 23
  - Demo: Create Header and Footer with <cfinclude> 23
- **Exercise 1: Build Dynamic Page Footer using Variables and Date Functions** 25
  - Challenge 26
- **Possible Solution to Exercise 1** 27

Part 3: Dynamic Data: Querying the Database 29

- **Database Basics** 29
- **Introduction to SQL** 32
  - Select Statement 32
  - Update Statement 32
  - Insert Statement 33
  - Delete Statement 33
- **Data Source Name (DSN) / Remote Development Server (RDS)** 33

The DSN Used in This Class: movieList 34
Course Project Database 35
Querying the database with <cfquery> 39
<cfdump> for Quick Output 40
Exercise 2: Query the database 43
Challenge 44
Possible Solution to Exercise 2 45
Customizing Display with <cfoutput> 47
Demo: Using <cfoutput> 47
Building Dynamic Tables 49
Shortcut: <cftable> 50
Shortcut: Dynamic Table Tool (in Dreamweaver) 52
Exercise 3: Display Resulting Records manually with <cfoutput> 55
Challenge 55
Possible Solution to Exercise 3 57

Part 4: Creating a Drill-down Interface 59

Passing Variables between Pages 59
"Two-page method" 60
Demo: Pass Variables via Links 60
Demo: List of Actors with links 62
Receive Variables through the URL 63
Using a WHERE clause in a SQL Statement 63
Protecting Against SQL Injection Attacks with <cfqueryparam> 64
Exercise 4: Drill-down for More Detail 67
Challenge 68
Possible Solution to Exercise 4 69

Part 5: Conditional Statements and Forms 73

Conditional Statements 73
<cfif>, <cfelseif> and <cfelse> 74
Comparison Operators 75
Operator 75
Description 75
Demo: Conditional Statements 76
Demo: Conditional Statements Using URL Variables 76
Using the isDefined() function 79
Exercise 5: Conditional Statements – Data Validation 81
Challenge 82
Possible Solution to Exercise 5 83
HTML Form Review 85
Demo: Pass Variable through a Form 85
Exercise 6: Process Form Submission 89
Challenge 91
Possible Solution to Exercise 6 93
Self-Submitting Forms 97
Using the <cfparam> tag to set a default value 99
Quick Examination of a ColdFusion Framework (Methodology): Fusebox 99
Exercise 7: Self-submitting Form 101

Challenge 103
Possible Solution to Exercise 7 105
Dynamically Populating Select Lists 107
HTML Review: <select> tags 107
Demo: Dynamic Select List 107
Introducing the <cfform> Tag 109
Shortcut: <cfselect> 109
Exercise 8: Create a Dynamic Select List 111
Challenge 112
Possible Solution to Exercise 8 113
Part 6: Search Interface 117
Creating a Search Interface 117
Demo: Using the LIKE clause 117
Using % and _ in a LIKE Statement 117
Demo: Building Dynamic SQL Statements 119
Exercise 9: Create a Search Interface 123
Note 125
Challenge 125
Possible Solution to Exercise 9 127
Part 7: Insert Records into the Database 129
SQL Insert Statement 129
Demo: Insert Record Part 1 – the Form 129
Insert Record Part 2 – the Insert 130
Shortcut: <cfinsert> 131
Redirect Users with <cflocation> 131
Important note about <cflocation>! 132
Exercise 10: Insert a New Actor in the Database 133
Challenge 134
Possible Solution to Exercise 10 137
Automated Form Validation 139
Client-side vs. Server-side validation: When does the validation code run? 141
Exercise 11: Automatic Client-side (or Server-side) Form Validation 143
Challenge 143
Possible Solution to Exercise 11 145
Part 8: Edit (Update) Database Records 147
SQL UPDATE Statement Review 147
Demo: Update Record Page 1 – select the record to edit 148
Passing the Primary Key 148
Page 2 – View Current Data in a Form 149
Page 3 – Perform the Update to the Database 151
Shortcut: <cfupdate> 152
Exercise 12: Edit a Record 153
Challenge 155
Possible Solution to Exercise 12 157
Note on Deleting records 159
Review of the SQL Delete Statement 159
"Deleting" without deleting 159

No <cfdelete>! 159

Part 9: Reusing Code 161

Reusing code with <cfinclude> and <cflocation> 161

Custom Tags 161

Demo: custom tags 162

Where to store Custom Tags 165

Demo: Custom Tag with Parameters 166

CALLER and ATTRIBUTE scopes 167

Using <cfmodule> 168

A Note about CFX tags 168

Exercise 13: Calling a Custom Tag to Display a List of Years 169

Challenge 170

Possible Solution to Exercise 13 171

User Defined Functions (UDFs) 173

Creating UDFs with the <cffunction> tag 173

Using ColdFusion Components (CFCs) 174

Creating Components 174

Calling or Invoking Components 175

Passing Arguments to Components 176

The Component Code 177

The main CFML page 178

View a Component directly in the browser 179

Exercise 14: UDFs 181

Challenge 182

Possible Solution to Exercise 14 183

Part 10: Using Session Variables for Password Protection 185

Session Variables 185

Creating Password Protected Pages 186

The Included Page: demo-password-protect.cfm 186

The Log in Page: demo-password-form.cfm 187

Application.cfc 189

Note regarding Application.cfm 189

Locking Session and Application variables with <cflock> 189

Exercise 15: Password Protecting Pages (optional) 191

Challenge 193

Possible Solution to Exercise 15 195

Part 11: Tracking User Information with Cookies (optional) 199

Demo: setting cookies 201

Note: When Using Cookies and ColdFusion 5.0 203

Exercise 16: Remember Users by using Cookies 205

Challenge 206

Possible Solution to Exercise 16 207

Part 12: Sending email with <cfmail> (optional) 209

Using ColdFusion to Send Email 209

<cfmail> Tag Syntax 210

Demo: Sending an email 210

Exercise 17: Sending Automated Emails **211**
Possible Solution to Exercise 17 ..... **213**
Appendix A: Resources **215**
Appendix B: Set-up Notes **217**
Appendix C: Create a Dreamweaver "Site" **219**
Location of our course files 219
Site Creation – Basic **219**
The Advanced Tab – Additional Categories: 229
Site Files Panel **230**
"Create a Site" vs. "FTP or RDS Server Connection" **232**
Appendix D: Selecting Among ColdFusion Code Reuse Methods **235**