

SEMESTER- IV

COURSE: VISUAL PROGRAMMING

COURSE CODE 05BCAR17411

CREDITS : 04

UNIT I

Introduction to Visual Programming: The IDE, The Visual Programming editor. The form object: Properties, events and methods of forms; Properties – Name, Caption, Back color, Border style, controlbox, maxbutton, moveable, startup position, height, width, left, top, scale mode, window, state-Events –load, unload, Click, Activate, Deactivate, Resize, methods – Show, hide, cls, Unload, print.-Controls –Properties and events of different controls such as command buttons, labels, textboxes image controls, timer, horizontal and vertical scroll bars, option buttons, check boxes, frames list and combo boxes. Predefined Dialog Boxes – MsgBox and Input Box

UNIT II

Programming: Data types: variables; declaration and scope arithmetic operations, Study of form and code modules, private and public procedures, Main procedure, Sub and Functions. Mathematical and string Functions-Branching and Looping Statement; If – Then, if –Then – Else and Nested If Statements; Select Case –different forms; For – Next, while – Wend and Do – Loops statements; Arrays- declaration. Static and dynamic arrays. Array and Function, menus and toolbars-Creating menus and toolbars: Working with the menu editor, Designing Multiple Document interface forms. Microsoft common controls

UNIT III

Dynamic Link Libraries & Database connectivity – DAO and ADO Tables and Queries, ActiveX Data objects-Visual C++ Programming: Objects-Classes-VC++Components – Resources-Event Handling – Menus – Dialog Boxes – Importing VBX Controls – Files – MFC File Handling-Document View Architecture – Serialization-Document View Architecture – Serialization

UNIT IV -TENSILE TESTING OF TEXTILES

Interfacing Other Applications – Multiple Document Interface (MDI)-Splitter Windows – Exception Handling – Debugging-Object Linking and Embedding (OLE) – Database Application-DLL- ODBC

PRACTICAL

CREDITS : 2

- 1 Design a User Interface (UI) to accept the student details such as name, department and total marks. Validate the input data and calculate the percentage and division.
- 2 Design a VB application which has MDI and Child forms. Create a menu having the items such as file (New, Open), Format (Font, Regular, Bold, Italic) and Exit in the MDI form. Also create a text box and use a Common Dialog Box control for changing the font, fore color and back color of the text box.

- 3 VB program to Encrypt and Decrypt a string. (Use Rnd() to generate the Encryption and Decryption keys).
- 4 Create a Vending machine application that display images for four snacks and corresponding labels that indicates the number for each snack. The GUI should contain a text box in which the user specifies the number of desired snack. When the dispense snack button is clicked, it should display on a label the name of the snack dispensed. At end it should print (display) the bill of the product.
- 5 Design a small Alarm Clock Application.
- 6 Write a VB Program to Validate the username and password form the database and display the appropriate message.(Use Data Control)
- 7 Design a VB application to accept the Item Details (Item ID, Item Name, MFD Date, Unit of Measure and RatePerUnit). Item Id should be a system generated ID. The application should allow operations –Add, Modify, Delete, Update and Navigations of the items. Use ADO Data controls and Grid controls.
- 8 Design a VB application to record the employee details such as EmpId, EmpName, Designation and BaiscPay . Calculate the DA, HRA, Deduction and Gross Salary. (Make the necessary assumptions) Use Select ..case for decision making.
- 9 VB program to calculate the simple interest and compound interest. Use DLLs for the calculation.
- 10 Create a VB application which is linked to book database. The application should allow the user to perform a search of the book from the database, when user clicks a button .User should be able to search any book with its title, ISBN no. or Author Name.
- 11 VC++ program to create a Dialog box and display the position of mouse pointer within the dialog box.
- 12 VC++ program to create and load a simple menu in a Window.

References:

1. Gurumit Singh, “Visual Basic 6”, First Edition, Firewall Media, 2007.
2. CharlesPetzold, “Windows Programming”, 5th Edition, Microsoft Press, 1999.
3. SteveHolzner, “Visual C++ Programming”, Second Edition
4. Gary Cornell - Visual Basic 6 from the Ground up - Tata McGraw Hill - 1999.
5. Noel Jerke - Visual Basic 6 (The Complete Reference) - Tata McGraw Hill - 1999.

COURSE: WEB PROGRAMMING

COURSE CODE: 05BCAR17412

CREDITS: 04

UNIT I - FUNDAMENTALS OF WEB

Internet, WWW, Web Browsers, and Web Servers, URLs, MIME, HTTP, Security, The Web Programmers Toolbox-**XHTML**: Origins and evolution of HTML and XHTML, Basic syntax, Standard XHTML document structure, Basic text mark-up, Images, Hypertext Links, Lists, Tables-**HTML and XHTML**: Forms, Frames in HTML and XHTML, Syntactic differences between HTML and XHTML

UNIT II - CSS

Introduction to style sheet, Types of CSS, Basic CSS syntax, Internal External, inserting a CSS, Background properties, Text properties, Font properties, Border properties, Margin properties Padding list & table properties-**URL and Linking-Style Sheets: Using** multiple sheet, Understanding the cascading style sheets, Inline styles, creating style sheets with the style elements- Building a web page-**Java Script**: Overview of JavaScript, Object orientation and JavaScript, General syntactic characteristics, Primitives, Operations, and expressions, Screen output and keyboard input, Control statements-**Java Script Functions**: Object creation and Modification, Arrays, Functions, Constructor, Pattern matching using expressions, Errors in scripts, Examples

UNIT III - JAVA SCRIPT AND HTML DOCUMENTS

The JavaScript execution environment, The Document Object Model, Element access in JavaScript-**Event Handling**: Introduction, Events and event handling, Handling events from the Body elements-**Components**: Button elements, Text box and Password elements-**Document Object Model**: The DOM 2 event model, The navigator object, DOM tree traversal and modification-

UNIT IV - DYNAMIC DOCUMENTS WITH JAVASCRIPT

Introduction to dynamic documents, Positioning elements, moving elements, Element visibility, Changing colors and fonts-**Dynamic Content**: Dynamic content, stacking elements, Locating the mouse cursor, reacting to a mouse click, Slow movement of elements, Dragging and dropping elements-**XML**: Introduction, Syntax, Document structure, Document Type definitions, Namespaces, XML schemas-**Displaying XML Documents**: Displaying raw XML documents, Displaying XML documents with CSS, XSLT style sheets, XML Processors, Web services

PRACTICAL

CREDITS:2

1. Create an Xhtml document containing nested list by using ordered and unordered list.
2. Write a JavaScript code to check whether the given number is palindrome or not.
3. Write a JavaScript code to check whether a given number is prime or not.
4. Create a form having number of elements (Textboxes, Radio buttons, Checkboxes, and so on). Write JavaScript code to count the number of elements in a form.
5. Create a HTML form that has number of Textboxes. When the form runs in the Browser fills the textboxes with data. Write JavaScript code that verifies that all Textboxes has been filled. If a textbox has been left empty, popup an alert Indicating which textbox has been left empty.
6. Develop a HTML Form, which accepts any Mathematical expression. Write JavaScript code to Evaluates the expression and Displays the result.
7. Create a page with dynamic effects. Write the code to include layers and basic animation.
8. Write a JavaScript code to find the sum of N Natural Numbers. (Use user-defined function)
9. Write a JavaScript code block using arrays and generate the current date in words, this should include the day, month and year.
10. Create a form for Student information. Write JavaScript code to find Total, Average, Result and Grade implementing animation of ball moving.
11. Create a form for Employee information. Write JavaScript code to find DA, HRA, PF, TAX, Gross pay, Deduction and Net pay.
12. Create a contact Form by using input text boxes, command buttons. While submitting the form, It should display Thanks message.
13. Write a JavaScript code to perform all arithmetic operation.
14. Create a form consists of a two Multiple choice lists and one single choice list
 - (a) The first multiple choice list, displays the Major dishes available
 - (b) The second multiple choice list, displays the Starters available.
 - (c) The single choice list, displays the Soft drinks available.
15. Create a web page using two image files, which switch between one another as the mouse pointer moves over the image. Use the on Mouse Over and on Mouse Out event handlers.

References :

- Advanced java 1.1 programming by Jeffrey C. Rice.
- Ken Arnold, James Gosling, David Holmes, "The Java TM Programming Language", Addison- Wesley, 2006
- Bill Venners, "Inside the Java 2 Virtual Machine", McGraw-Hill, 2nd edition, 2000.
- Santhosh, "Spring and Hibernate", Tata McGraw-Hill, 2009.

COURSE: SOFTWARE ENGINEERING

COURSE CODE: 05BCAR17413

CREDITS : 4

UNIT I - INTRODUCTION

Software Products and Software process-Process models: Waterfall model, Evolutionary Development, Bohemia's Spiral model, Overview of risk management, Process Visibility, Professional responsibility-Computer based System Engineering: Systems and their environment, System Procurement, System Engineering Process, System architecture modeling-Human Factors, System reliability Engineering. Requirements and Specification: The requirement Engineering Process, The Software requirement document, Validation of Evolution of requirements-Viewpoint – oriented & method based analysis, system contexts, Social 7 organizational factors. Data flow, Semantic, Objects, models, Requirement Specification, Nonfunctional requirement.

UNIT II – SOFTWARE MODELLING

Software Prototyping: Prototyping in software process, Prototyping techniques, User interface prototyping-Software Design: Design Process, Design Strategies, Design Quality, System Structuring control models, Modular decomposition, Domain Specific architecture-Object Oriented& function oriented design: Objects, object Classes and inheritance Object identification, An object oriented design example-Concurrent Objects, Data flow design Structural decomposition, Detailed Design, A Comparison of design Strategies-User interface design: Design Principles, User System interaction, Information Presentation, User Guidance, Interface Evaluation-

UNIT III - SOFTWARE METRICS

Software Reliability and reusability: Software reliability metrics, Software reliability Specification-Statistical testing, Reliability Growth modelling, Fault avoidance & tolerance-Exception handling &defensive programming-Software development with reuse, Software' development for reuse-Generator based reuse, Application System Portability

UNIT IV –SOFTWARE VALIDATION

Software Verification and Validation: The testing Process- Test Planning & Strategies, Black Box, Structural, interface testing, Program inspections-Mathematically based verification, Static analysis tools, Clean room software development.-Management Issues: Project management, Quality management-Software cost estimation, Software maintenance.

References :

- Ian Sommerville – Software Engineering, 9th Edition, Pearson Education Ltd, 2010.
- Roger S. Pressman – Software Engineering, A Practitioner's approach, 7th Edition, McGRAW-HILL Publication, 2010.
- Pankaj Jalote, “An integrated approach to Software Engineering”, 3rd Edition, Narosa Publishing House, 2013.

COURSE TITLE: CONCEPTS OF MULTIMEDIA AND ANIMATION (SEC)

COURSE CODE :05ASECO17431

CREDITS : 02

Unit I: Basics of Multimedia Systems

Introduction – What is Multimedia: Definitions – CD ROM, DVD and Multimedia – CD ROM, DVD, Flash Drives and Multimedia-Where to use Multimedia: Multimedia in Business – Multimedia in School – Multimedia in Home – Multimedia in Public Places-Virtual Reality, Introduction to Making Multimedia-Stages of Project - Software – Hardware – CreativityMultimedia Skills: Video specialties, Audio specialties-The stage of Project, hardware & software requirements to make good multimedia skills and Training opportunities in Multimedia Motivation for Multimedia usage.

Unit II: Multimedia Content Types

Text - Power of Meaning – About font and Faces – Using Text in Multimedia – Computers and Text – Font Editing and Designing Tools - Layout and Formatting-Hypermedia and hypertext-Sound: The power of sound – Multimedia system sounds – digital audio – Making MIDI Audio – Audio File Formats – MIDI Versus Digital Audio-Adding Sound to Multimedia Project – Music CDs – Production Tips-Audiom Techniques

Unit III: Animation

Images: Before start to create: Plan, organize tools, multiple monitors – Making still image - Color – Image file formats-Animation: The power of motion – Principles of Animation – Animation by Computer-Making animations that work-Video: Using Video – How video works – Analog Display Standards – Digital Display standards-Digital Video - Video Recording and Tape formats – Shooting and Editing Video

Unit IV: Multimedia Tools

Basic Software Tools: Text editing and word processing tools-OC Software Painting and Drawing Tools – Image Editing Tools-Sound Editing Tools Animation, Video and Digital Movie Tools-Multimedia Authoring Tools: Type of Authoring Tools – Card and Page based Authoring Tools-Icon and Object based authoring tools – Time based Authoring tools.

References:-

1. Tay Vaughan, Multimedia: Making it work, Tata McGraw Hill Edition, Seventh Edition, 2013.
2. Ranjan Parekh, Principles of Multimedia, Tata McGraw-Hill Education, 2013.
3. Ralf Steinmetz, KlaraNahrstedtm, Multimedia Computing, Communications &Applications, Pearson Education Singapore Pvt.Ltd, First Edition. 2012.
4. MULTIMEDIA SYSTEMS – John F.Koegel Buford, Addison Wesley. 2013.
5. Judith Jeffcott, MULTIMEDIA IN PRACTICE Technology and Application chapters: 1,2,3,12,13 printice Hall, 2011.