St. Xavier's College–Autonomous Mumbai

Syllabus
For 5ᵗʰ Semester Courses in

B.Voc (Tourism)
B.Voc (Software Development)

(June 2016 Onwards)

Theory Syllabus for Courses:
General Education Component
S.BVS.5.01/A.BVT.5.01:   Elements of Digital Design
S.BVS.5.02/A.BVT.5.02:   Entrepreneurship I
S.BVS.5.03/A.BVT.5.03:   Psychology

General Education Component

B. Voc. Semester V   **COURSE: S.BVS.5.01/BVT.5.01**

ELEMENTS OF DIGITAL DESIGN

Learning Objective: Learn to explore the beauty of digital design software from the practical to the painterly artistic. In 45 sessions, practice the editing concepts to understand how Photoshop will help to create successful customized images.

Number of lectures: 45

Unit 1 - Getting started with Photoshop   **Number of lectures 10**

- Fundamentals of Photos editing softwares
- What new in photoshop
- Basics of Images
- Vector Images
- Bitmap Images
- Interfacing with the Photoshop Desktop
- Working with The Menu Bar and Tool Box
- File and Edit Menus
- The Image Menu
- The Layer Menu
- The Select Menu
- The Filter Menu
- The View Menu
- The Help Menu
- ToolBox
- New Features in Photoshop
- Custom Brushes
- Healing Brush
- Picture Package
- Web Photo Gallery
- Spell Checking
- Opening Recent Images
- Importing Images
- PDF Image

- ☐ Annotations
- ☐ WIA Support
- ☐ Placing Images
- ☐ Optimizing Images
- ☐ File Browser
- ☐ PDF Security
- ☐ Understanding the Selecting Tools
- ☐ Rectangular Marquee
- ☐ Move Tool
- ☐ Lasso Tool
- ☐ Magic Wand
- ☐ Painting and Drawing Tools
- ☐ Editing and Retouching Tools
- ☐ Background Eraser (E)
- ☐ Erasing Image Background Color
- ☐ Guides, Grid and Slices
- ☐ Transform
- ☐ Layers
- ☐ Effects
- ☐ Filters
- ☐ Using the Color Tools
- ☐ Working with Palettes
- ☐ Actions palette
- ☐ History Palette
- ☐ Swatches Palette
- ☐ Brushes Palette
- ☐

Unit 2 - Painting & drawing Tools   **Number of lectures 8**

Using The Brush and Pencil Tool

- ☐ Choosing a Brush Size
- ☐ Picking a Painting or Drawing Mode
- ☐ Setting Opacity And Flow
- ☐ Using Airbrush Mode
- ☐ Blending with the Smudge Tool
- ☐ Loading Brush Sets
- ☐ Working With The Brushes Palette
- ☐ Renaming Brush Presets
- ☐ Deleting Brush Presets
- ☐ Working with the Healing Brush
- ☐ Patching Images
- ☐

Unit 3 - Color Management in Photoshop   **Number of lectures 9**

Applying Colors to your Image

- Using the Color Picker
- Selecting Colors with the Eyedropper Tool
- Working with Color Channels
- Displaying and Hiding Channels
- Mixing Color Channels
- Working with the Color Table
- Using Auto Color
- Using Special Color Effects
- Inverting Colors
- Working with Color Thresholds
- Equalizing Colors
- Posterizing Images
- Creating a Gradient Map
- Desaturated Colors
-

Unit 4 - Working with Layers Session 27:   **Number of lectures 7**

Layer concepts

Creating New Layers

- Activating a Layer
- Duplicating Layers
- Arranging Layers
- Working with Layer Locks
- Deleting Layers
Creating Layer Based Slice

Unit 5 - Using fills & styles Session 31:   **Number of lectures 11**

Using the Pattern Stamp Tool

- Applying Pattern Fills
- Working with Styles Palette
- Understanding the Gradient Tool
- Customizing a Gradient
- Applying a Gradient
- Working with the Pattern Maker
- Creating your Own Patterns

- Working with the Layer Style Dialog Box
- Customizing Blending Options
- Drop Shadow
- Inner Shadow
- Outer Glow
- Inner Glow
- Bevel and Emboss

Continuous Internal Assessment
Assignments / Project

Mid Term test.

List of Text Books:

- **Photoshop(R) 7: The Complete Reference**
by Laurie Ann Ulrich (Author)

Photoshop CC:

by Lesa Snider (Author)

List of Practicals:

Experiment 1. Moving objects from one layer to another using layer properties.

Experiment 2:Painting objects with Gradient and enhancing colour values

Experiment 3. Applying black and white ecffect to perticular object in image.

Experiment 4. Applying motion filter effect.

Experiment 5:Implementation Lens flare, colour lense & light reflection

Experiment 6.Applying dispersion effect.

Experiment 7. Implementation of water illusion effect.

Experiment 8.Creating Gallery

T. Y. B.VOC   **COURSE: BVS/BVT 5.02**

Title: ENTREPRENEURSHIP (Part I)

Learning Objectives:
To equip students with knowledge of creating, establishing, managing, developing or pruning enterprises, either of their own or to understand enterprises that they will be dealing.

Total Lectures: 60

UNIT 1: The Entrepreneurial Evolution   **20 lectures**
- Nature & Development of Entrepreneurship.
- The Entrepreneurial Decision Process.
- Venturing- New Venture Formation.
- Types of Enterprises.
- Role of Entrepreneurship.
- The Entrepreneurial & Intrapreneurial Debate.
- Identifying & Evaluating Opportunity for Enterprise Development.
- Resource requirement to set-up & start-up & operate Enterprise.
- Strategic/Tactical/Operational orientation of establishing Enterprise.
- Management Structure.
- Entrepreneurial background & characteristics.
- Role modeling of successful entrepreneurs.
- Cross border Entrepreneurship.
- Case Studies.

UNIT 2: Creativity in Enterprise   **20 lectures**
- Idea Generation.
- Creative Problem Solving.
- Product Identification & Development.
- Technology in Enterprise establishment.
- Enterprise as a multi-dimensional enitity.
- The Business Plan.
- The Functional Plan.

UNIT 3: Start-up establishment of Enterprise   **20 lectures**
- Sources of Funding.

- Venture Capital.
- Risk evaluation of Enterprise.
- Enterprise valuation.
- Leading and Managing the Enterprise.
- Growth Strategies.
- Exiting the Enterprise.
- Ending the Enterprise.

Evaluation:

- CIA 1 (20 marks): Class Test
- CIA 2 (20 marks): Project/Assignments
- End Term Exam: 60 marks (Written exam)

TEXT BOOKS:
- Entrepreneurship – 6th Edition. Robert D Hisrich, Michael P Peters, Dean A Shepherd.McGraw-Hill.
- Entrepreneurship – David Stokes, Nick Wilson, Martha Mador.South-Western Cencage Learning.

REFERENCES:
- The Oxford Handbook of Entrepreneurship – Mark Casson, Bernard Yeung, Anuradha Basu, Nigel Wadeson. Oxford University Press.
- Entrepreneurship in India. Dr Sanjay Tiwari, DrAnshujaTiwari. Sarup& Sons.
- Entrepreneurship Development in India. Sami Uddin. Mittal Publications.
- Dynamics of Entrepreneurial Development & Management - Vasant Desai. Himalaya Publishing House.
- Patterns of Entrepreneurship Management. 3rd Edition. Jack M Kaplan, Anthony C Warren. John Willey & Sons Inc.

5.03
Title: PSYCHOLOGY

Learning Objectives:
- *To enhance the thinking, emotions, communication and interpersonal skills of students so that they can be good at customer handling and services.*
- *Enable them to maintain a healthy work-life balance.*

Total Lectures: 60

Unit 1: Understanding the Self   **15 lectures**
- Self esteem and Subjective well being
- Positive Thinking and Optimism
- Creative Thinking, Problem Solving and Decision Making
- Goal setting and Time management
- Motivation
- Emotional intelligence

Unit 2: Working with others   **15 lectures**
- Communication (Verbal and Non Verbal)
- Empathy and Listening skills
- Giving and receiving Feedback
- Conflict Management
- Team Building and Team work

Unit 3: Customer Satisfaction   **15 lectures**
- Psychology of customer service: Creating and sustaining customer relationships
- Product knowledge
- Sales and its relation with customer satisfaction
- Handling complaints

Unit 4: Balancing work and life   **15 lectures**
- Work Life Conflict
- Impression Management
- Job satisfaction and Employee satisfaction
- Stress Management

Evaluation:
- CIA 1 (20 marks): Class Test
- CIA 2 (20 marks): Assignments
- End Term Exam: 60 marks (Written exam based on case study analysis)

References

Feldman.R.,(2016), *Understanding Psychology* ,Tenth Edition, McGraw Hill Education Pvt.Ltd, India.

Kumar.V., (2008), *General Psychology*, Himalaya Publishing House ,India.

Weiten.W., Hammer.E.& Dunn.D.,(2009), *Psychology and Contemporary Life: Human Adjustment,*Wadsworth,Cenagage Learning,USA.

St. Xavier's College–Autonomous Mumbai
Syllabus
For 5ᵗʰ Semester Courses in B. Voc (Software Development)
From June 2016, onwards

Skill Component courses

Theory Course Syllabus for:

  S.BVS.5.04   Mobile App Development using Android II

  S.BVS.5.05   DOTNET Technologies ASP.NET

Practical Course Syllabus for:

S.BVS.5.PR
S.BVS.5.PROJ   Project - I

ADVANCED ANDROID PROGRAMMING

Learning Objective: To master the Android developement using Advanced programing features using,XML,Hypertext and scriting and desktop language.

[Total Lectures 60]

UNIT 1: Android Device Integration   [7]

CameraApp, Camera Recording, Bluetooth,WIFI, Contacts,Audio Capture, Theme/style.Thread.

UNIT 2:CustomeGesture   [7]

CommonGesture, TouchEvent, MotionEvent, PinchExample, ClipBaord, ImplicitIntent,TransitionDemo, NewDrawer Demo, Scene Transition

UNIT 3:Android API using HTML & script   [6]

Online Website, Offline website, Android event with Javascript, WebViewClient/WebChromeClient, File reading, Fragment Example

UNIT 4: Database, fonts & Explicit events   [15]

SQlite Database, MaterDetailsFlow, Contact list database, Custom font, ClipBaord, CardDemo,

Card Demo, AppBar, FabExample, ExplicitEvent, CustomePrintDatabase, StorageDemo

UNIT 5:Location Based Services **[15]**

Network Connectivity, GPS, Google Map, Permission Manager, Local Bound, Remote Bound, Send Broadcast, Broadcast receiver

Continuous Internal Assessment

Assignments / Project

Mid Term test.

List of Text Books:

1. Android Design Pattern:Interaction Design Solution for Developers.(By: Greg Nudelman)

2. Programming Android-(By: Zigurd Mednieks, Laird Dornin, G. Blake Meike & Masumi Nakamura)

ASP.NET

LEARNING OBJECTIVE:

To equip the students with skills required in software industry.

Students will learn the latest of ASP.NET in framework 4.x/5.x.

Students can apply the skill learnt in developing website or application.

[Total Lectures 60]

Unit 1. Introduction, Controls, Event and web service   [20]

Introduction:

- Understanding Visual studio IDE environment
    1) Design view
    2) Source view
    3) Output window
    4) Error list window
    5) Intellisense
    6) Property window
    7) Object Browser window
    8) Start page
    9) Toolbar and Toolbox

- ASP.NET life cycle.
- Common Language Runtime (CLR) architecture.
- Using .NET Framework Class Library.

Different Controls: Introduction to control class, TextBox control,

Button Control, Label Control, Image control, ImageButton control ,

ImageMap control, DropDownList control, CheckBox control, RadioButton   control, Table control, Calendar control, SiteMap control , TreeView control ,   Menu control, Validation controls, Login controls, Database controls.

Windows Presentation Foundation (WPF).

Event handling: Application_Start, Application_End**,** Page_Load , Page_Unload, *Click event* **:**OnClick , *TextChanged event:* OnTextChanged , *Command event:* OnCommand , *CheckedChanged event:* OnCheckedChanged , *SelectedIndexChanged event:* OnSelectedIndexChanged, postback events

Using event argument etc.

Web service: What is a web service? SOAP and Web service. Creating web service, consuming web service.

Unit 2.   Validation, Navigation, and Ajax in ASP.NET   [20]

Validation Control: Introduction, basic validation controls, validation techniques, using advanced validation controls like:

Regular Expression Validator Control, Compare Field Validator Control

Range Validator Control,Validation Summary Control, Custom Validator Control

State Management: Using view state, using session state, using application state, using cookies and URL encoding.

Master Pages: Creating master pages, content pages, nesting master pages, accessing master page controls from a content page.

Navigation: Understanding Site Maps, Using the Sitemap Path Control, Formatting the Sitemap Path Control, Using the Menu Control, Using Tree View Control.

Ajax: Introducing AJAX, Working of AJAX, Using ASP.NET AJAX server controls.

Unit 3.   Database with ADO.NET, LINQ and Crystal Report   [20]

Database Elements:

1) ADO.NET Object model
2) Data Binding
3) Using Connection, Command,
4) DataReader classes, Queries returning result sets
5) Passing parameters in queries
6) Using Repeater control
7) Data Adapter, Using Data Set (Typed), Data Table, Data Row & Data Column
8) Introducing the ADO.NET Entity Framework.

9) Mapping Your Data Model to an Object Model
10) CRUD with ASP.NET
11) Authentication and Authorization with ASP.NET

LINQ:

1) Introducing LINQ and its Architecture
2) LINQ to Objects
3) LINQ to XML
4) LINQ to ADO.NET

Crystal Report:

1)   Adding a Crystal Report to an ASP.NET Application

2) Inserting Fields, Text, and Special Fields
3) Sorting, Grouping, and Subtotaling
4) Using Select Expert
5) Dynamic Formatting
6) Using the Crystal Reports Viewer

Continuous Internal Assessment

Assignment on unit 1, unit 2, unit 3

Mid Term Test.

BOOKS:

1) ASP.NET 4.0 in simple steps dreamtech press
2) Murach's ASP.NET 4 Web Programming with C# 2010, 4th Edition, Anne Boehm, Joel Murach, SPD.
3) Integrating Crystal Reports into an ASP.NET Application
   By Vincent Varallo Wrox Publication

REFERENCES:

1) ASP.NET – The Complete Reference Tata McGraw Hill.
2) Beginning ASP.NET 4: in C# and VB by Imar Spaanjaars Wrox Publication.
3) C# and .NET 4 by Christian wrox publication.

RESOURCE:

http://www.tutorialspoint.com/asp.net

PROJECT- I

[Total Lectures 180]

Project will carry 6 credits with 200 Marks.

Students can do live project in industry or in-house project.

Students are expected to give time equivalent to 12 lecture periods/week, out of which 3 periods will be contact time for guidance from internal guide. There will be continuous internal assessment (CIA) for 40% of the credit (80Marks).

This will consist of:

CIA 1→ assessment of synopsis and viva on it

CIA 2→ analysis of requirement gathering, system design including DFD,

      Use case, ER, Normalization, Context level diagrams etc.

Remaining 60% of the credit (120Marks) will be end semester examination consisting of documentation, presentation   and viva. This will be jointly examined by the project guide and external examiner under the subheading of marks as follows:

Documentation	Presentation (validation, database handling)	viva	Execution of various modules with report and testing	System design understanding
30	30	20	30	10

List of project categories

1) Hardware projects based on microcontroller / PIC
2) Networking projects
3) Mobile projects
4) Wireless technologies
5) Website projects
6) Desktop application
7) Real-time application in Linux/ Unix
8) Or any other suitable project which is approved by the project guide

Suggested format for project report S.BVS.6.PROJ

1) Cover page
2) Certificate from college(for in-house / external project)
3) Synopsis of project
4) Project report
   a) Table of content
   b) Definition of problem
   c) Objective and scope of project
   d) System analysis and design
      i) User requirement
         ▪ Functional requirement
         ▪ Non-functional requirement
      ii) Normalization
      iii) DFD , context level diagrams
      iv) Flowchart, ER diagram
      v) Use case diagrams
   e) Feasibility study
      i) Technical feasibility
      ii) Economical feasibility
      iii) Operational feasibility
   f) Software engineering paradigm applied
   g) Software and hardware requirement specification
   h) PERT chart, Gantt chart
   i) Coding
   j) Code efficiency
   k) Validation checks
   l) Testing
      • Test techniques(white box and black box testing)
      • Writing Test cases
      • Using test data
      • Generating defect reports
      • Use of testing tools(manual/automated)
   m) System security measures
   n) Cost estimation of project
   o) Reports
   p) Screen shots
   q) Future enhancement
   r) Bibliography
   s) Glossary
5) Students have to submit black book to college(1 per group) in A4 size with one side written (approx 150-200 pages) along with CD having full documentation and codes

6) Students doing project in industry will have to get certificate from the company.

ANDROID Practical List:

Learning Objective:

To introduce the concept android programming and develope app using android development studio.

List of Practicals:

Experiment 1.Android **Camera App(Customized preview)**
Experiment 2: Android **Voice Recording App**
Experiment 3. Video Recording app
Experiment 4: Common Gestures
Experiment 5: Android Text to speech
Experiment 6.Bluetooths scanner App/Barcode Reader
Experiment 7.WI-FI Scanner & pairing
Experiment 8.Sqlite Database to add,find &delete(Contact List) etc

ASP.NET PRACTICALS

LEARNING OBJECTIVE:

To equip the students with skills required in software industry. Students will learn the latest of ASP.NET in framework 4.0/4.x. Students can apply the skill learnt in developing website or application with practice from practical.

Attempt any 8 practical's from the list.

Practical No 1:

Create a simple Web Service that converts the temperature from Fahrenheit to Celsius, and vice versa create a simple Web Service that converts the temperature from Fahrenheit to Celsius, and vice versa. Also write an ASP program to consume this web service.

Practical No 2:

Design a UI and use validator for following conditions

· A password which is entered twice for confirmation

· The age of the user to be over 21

· The date to be after the 10/10/2000

Practical No 3:

Design a Login screen in ASP.NET which accepts user name and password. On submit it should check from the server whether the user exists or not . If the user exists in web server then he/she should be directed to proper web page with welcome message.
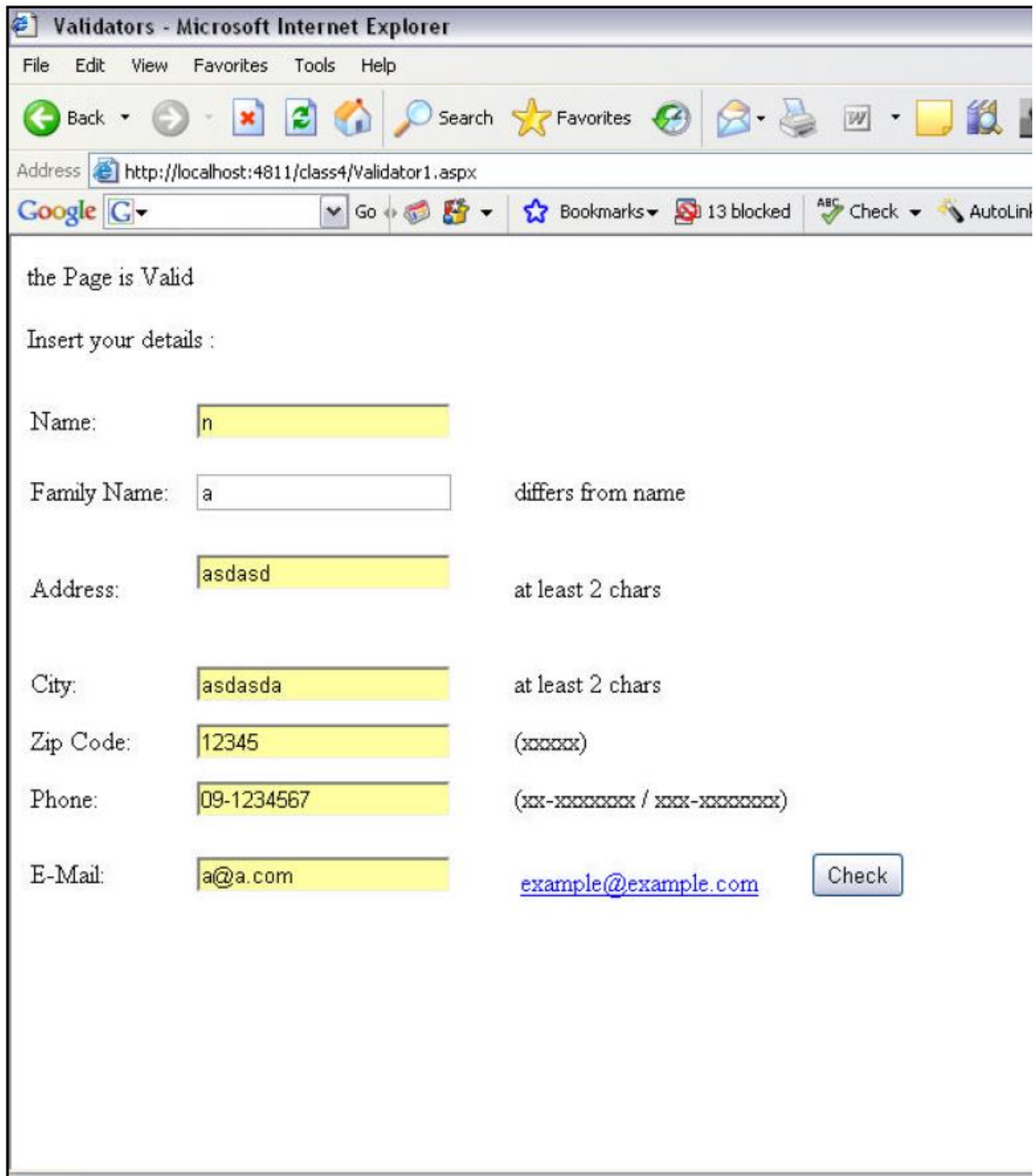
Practical No 4:

Write the following application.

The initial page is called Validator.aspx and it has 7 text boxes representing

(Name, Family Name, Address,City, Zip Code, Phone and e-mail address)

 and a Check button.

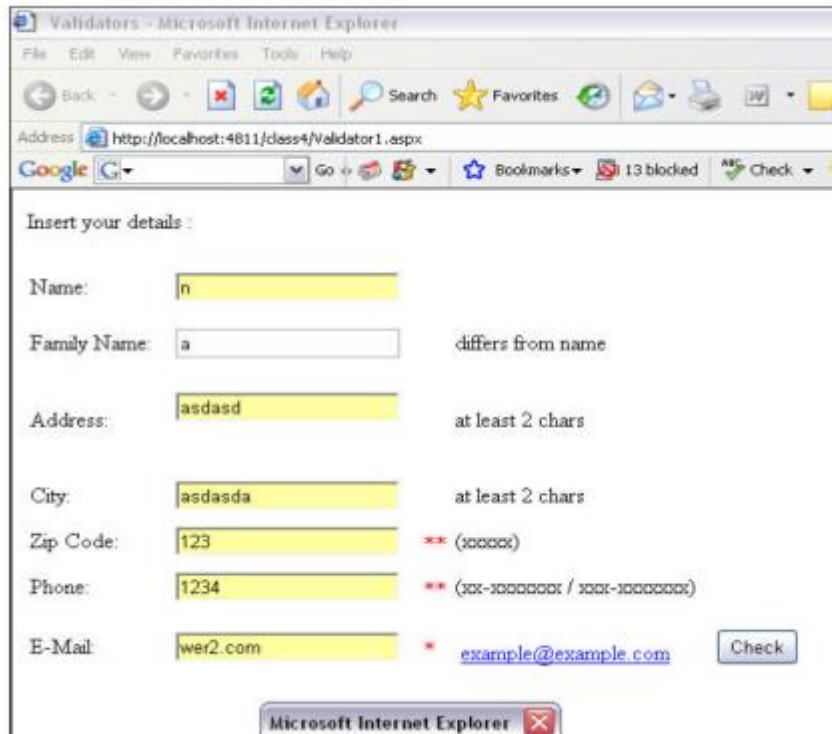User gets the following page after clicking on Check button:

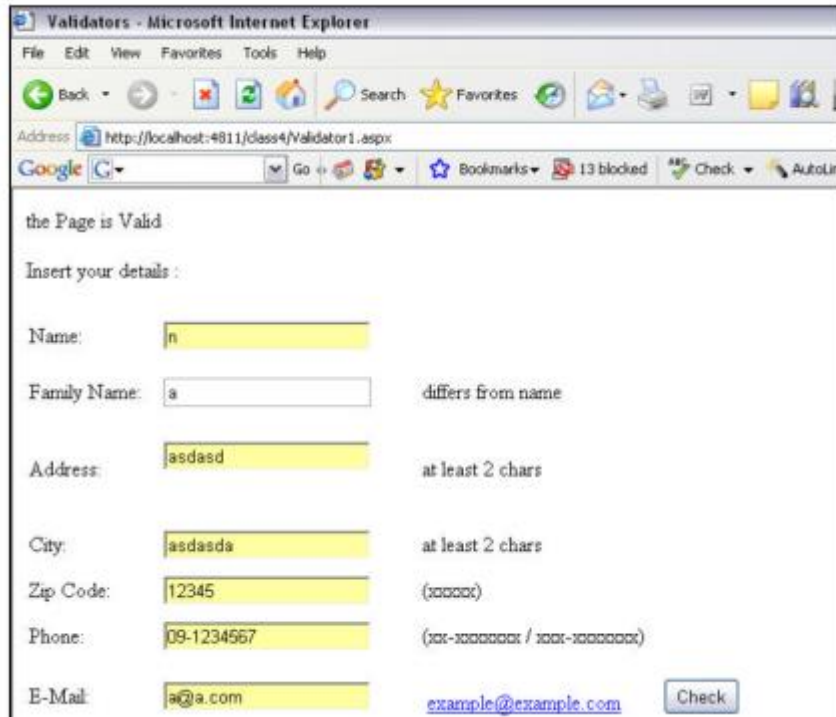The required validation actions are:

- name different from family name,

- address at least 2 letters,

- city at least 2 letters,

- zip-code 5 digits,

- phone according to the format XX-XXXXXXX or XXX-XXXXXXX,

• e-mail is a valid email.

After entering some of the details correctly user gets the following message:

And after a correct submission of all the details:

Practical No 5:

Create a screen which accepts student rollno . On click of submit it should display student result in the gridview with fields

Name   Course Marks   TotalMarks   Percentage

The database table contains table called student(rollno, name, course , address, year)

Result(rollno,subject,marks, totalmarks)

Practical No 6:

Using crystal report design simple marksheet for SSC result. The data should appear dynamically form database.

Practical No 7:

Design UI for credit card data entry. User writes all the details such as card no(16 digits) expiry date CVV no etc. These details should be validated using validators and database for appropriate fields. After verification it asks for amount of transaction with password. If amount < balance display insufficient balance else display page which tells transactions successful.

Practical No 8:

Create a Web application that illustrates the use of themes and master pages with Site-Map. And create a web page with CSS.

Practical No 9:

Write a Program in ASP that has a form taking the users name as input. Store this name in a permanent cookie & whenever the page is opened again, then value of the name field should be attached with the cookie"s content.

Practical No 10:

Demonstrate user's Authentication and Authorization in ASP.NET

Practical No 11:

Demonstrate the use ad-rotator to change advertisements on client side request.

Practical No 12:

Create a small online quiz application which displays the set of questions (differently to different users) based on the authentication and subject selection. At the end it displays the marks scored by candidate. Also it doesn't allow any page view without authentication (use session concept).

Practical No 13:

Create a registration form for students and demonstrate CRUD operation on it in ASP.NET.

Practical No 14:

Demonstrate use of System.Collections.Generic to store the details of students with Id, Name, Course, and D.O.B etc. Now store these details in database using Collection. Add search feature which searches record as per id.

Practical No 15:

Create a web application to insert 3 records inside the SQL database table having following fields (DeptId, DeptName, EmpName, Salary). Update the salary for any one employee and increment it to 15% of the present salary. Perform delete operation on 1 row of the database table.

Continuous Internal Assessment

Conducting practical test