Not on My Network, You Don't! May I Try This?

Collaboration to Enhance
IT Teaching/Learning Environment
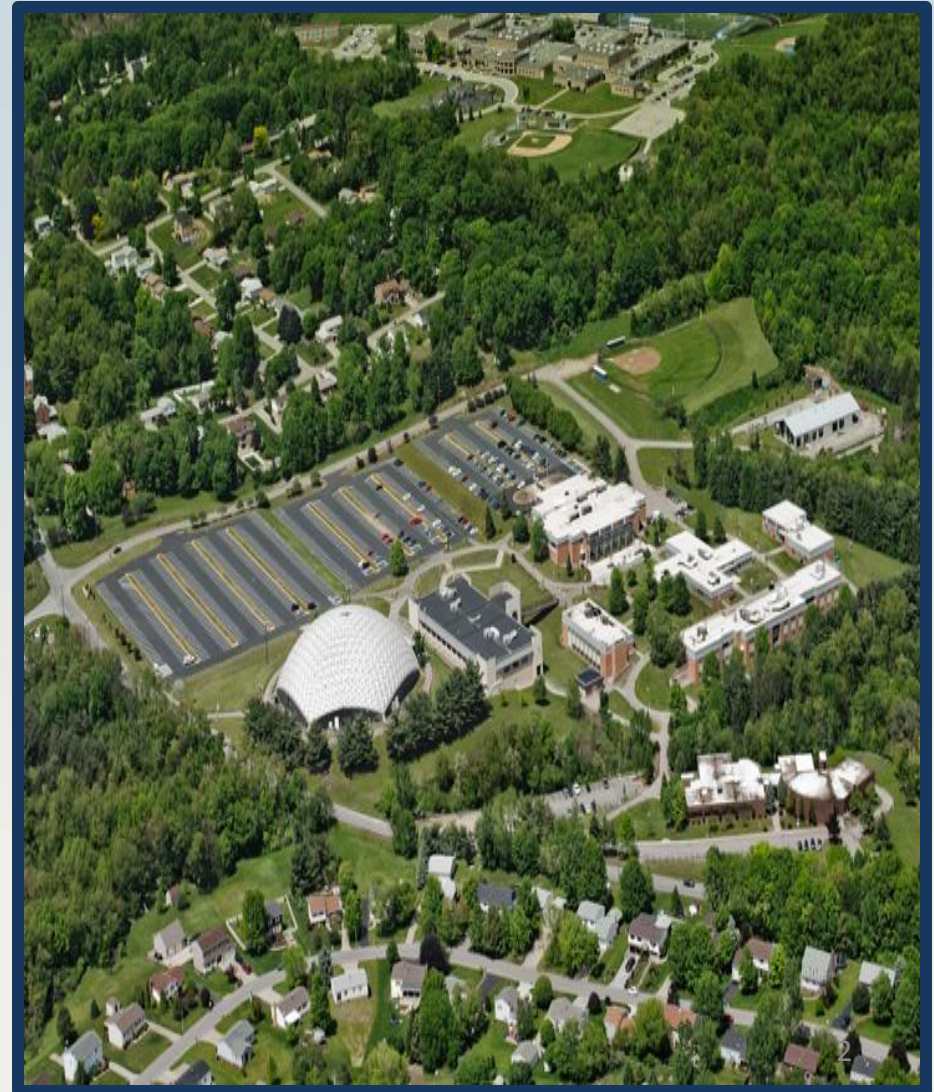
2013 Summer Faculty Institute
Tues June, 25, 11:45 – 12:45
CCAC, Boyce Campus
5th Floor, Room S585

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CCBC Community College of Beaver County

- ➢ **Founded in 1967**

- ➢ **Center Township Campus**

- ➢ **Aviation Sciences Center**

- ➢ **Casino Training Center**

- ➢ **Serves the 54 communities, 13 school districts, and 173,000 residents of Beaver County, Pennsylvania**

- ➢ **Sponsored by the Board of Beaver County Commissioners**

Presenters

Carl Dennis
Heidie Ganjineh Hutchinson
Walter Lukhaup

Community College of Beaver County

IT Faculty and IT Vice President

- Cyber Security: Carl – Assistant Professor
  - Cloud Computing, Virtualization

- Web Programming: Heidie – Associate Professor
  - Visual Programming, Web Programming

- Campus Technology: Walter – VP IT
  - Infrastructure, Hardware/Software

Not on My Network, You Don't!
May I Try This?

- Challenges Teaching IT Courses
- Look for Solution
- Cooperation/Collaboration to Develop a Realistic Solution
- Implementation of the Solution
- Evaluation of the Solution
  – Increase in Students' Interest
  – Demonstrate Students' Projects
- Impact of the Solution

Web Programming Curriculum 2006 - 2011

- Challenges Teaching IT Courses:
  - No Windows Server Labs
  - No Unix/Linux Server Labs
  - No Dedicated Lab(s) for Web Programming
  - Deep Freeze

Web Programming Curriculum 2006 - 2011

- What are the Options?
  - Look for Free Websites

- Problems with Free Website:
  - Lots of Popup Ads
  - Not Reliable
    - Every Day Chance of Going Out of Business
    - Loss of Data
    - Loss of Code

Web Programming Curriculum 2012

- Look for a Realistic Solution
  - Talk to other IT Faculty Directly and Ask for Help
  - Talk to the New VP for IT and Ask for Help
  - Talk to Web Programming Advisory Committee

Web Programming Curriculum 2012

- Amazing!!!
  - The VP for IT is Actually Interested in the Classroom Technology
  - A Web Programming Advisory Committee Member Recommends Giving Each Student His/Her Own Server
  - One IT Faculty is Willing to Experiment and Configure an External Server

CCBC External Linux Server!! 2012

CCBC External Linux Server 2012

- 1 Terabyte External Hard Drive
- Ubuntu 12.04.2 installed as the Operating System
- Contains LAMP Stack
  - Linux (Operating System)
  - Apache (Web Sever)
  - MySql (Data Base)
  - PHP (Scripting Language of the Web)

CCBC External Linux Server A Teaching/Learning Tool

- **You Can Teach Networking/Internet Concepts!!!**
  - Wireless Networks
  - Wired Networks
  - IP Addressing
  - MAC Address
  - Admin verses User Accounts
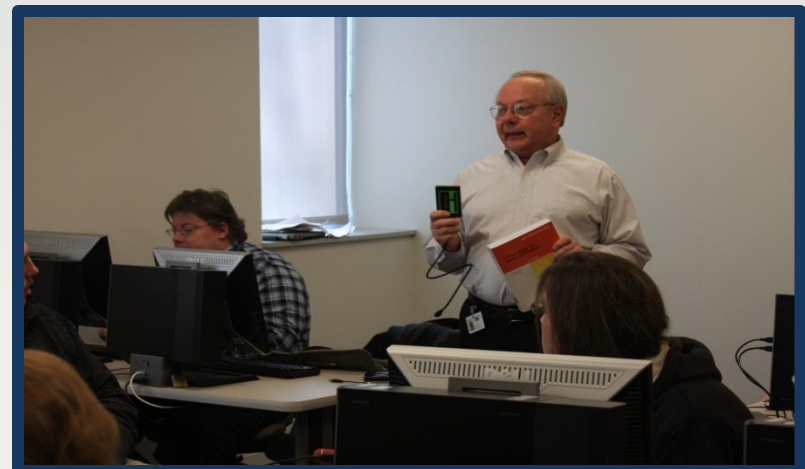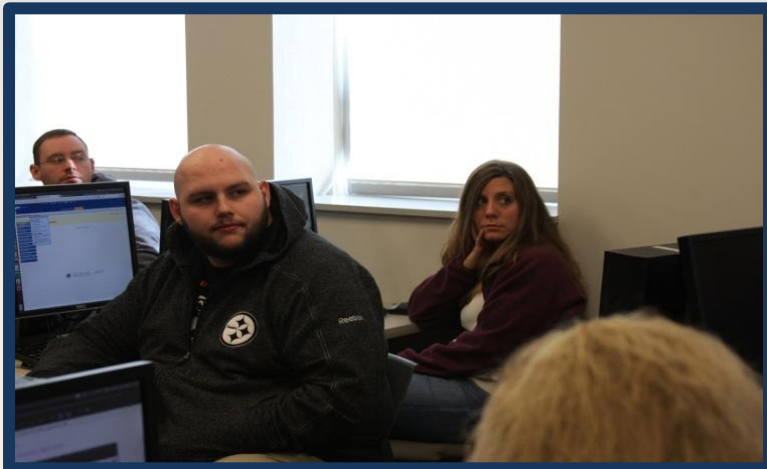 - Web Servers

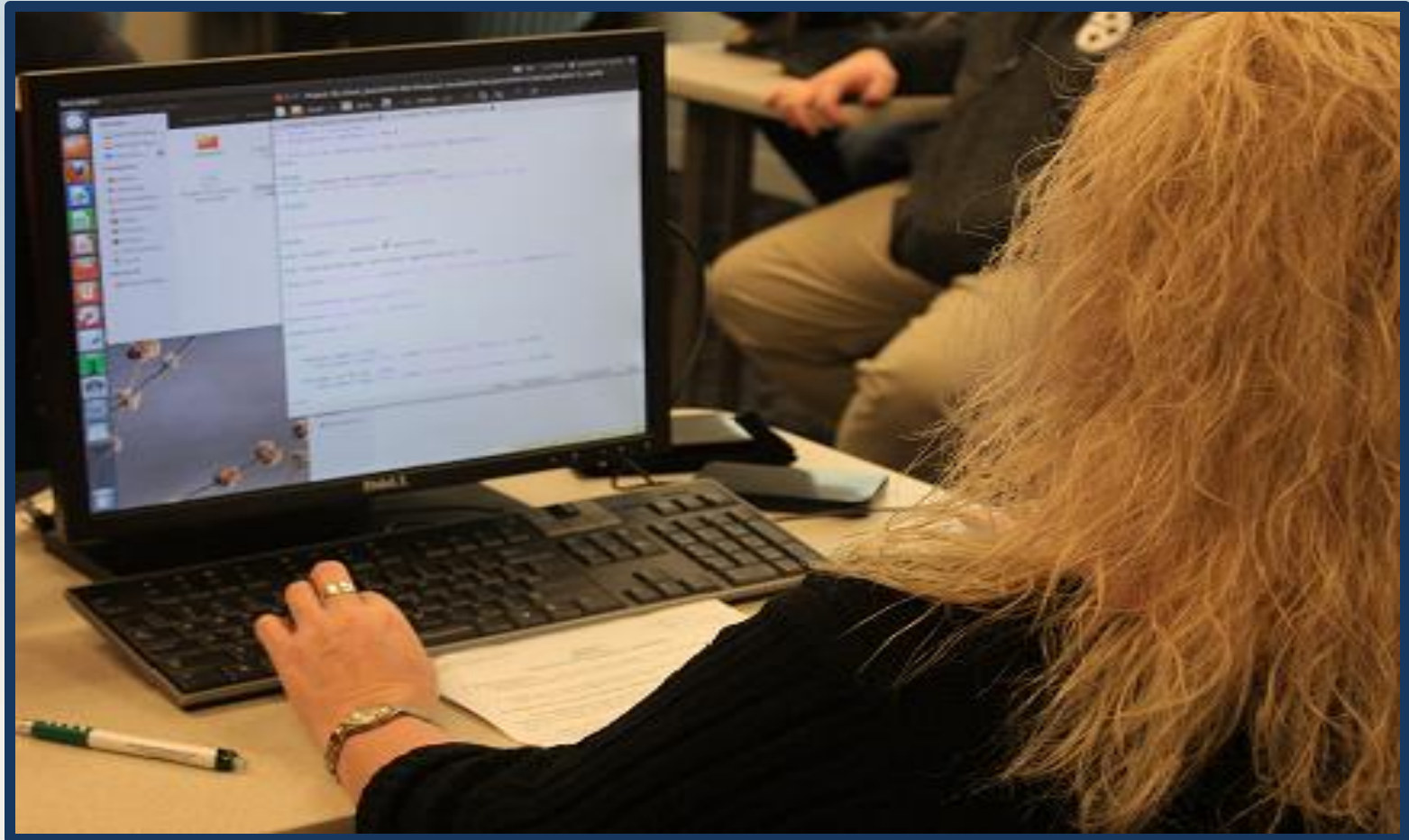# CCBC External Linux Server A Teaching/Learning Tool

- **You Can Teach Real Web Application Development!!!**
  - Client Applications
  - Server Applications
  - Necessary CGI for Connectivity Between Client and Server Apps
  - Use of Hyper Texts
  - Databases

CISW101 Web Scripting Languages – Fall 2012

CISW101 Web Scripting Languages – Fall 2012

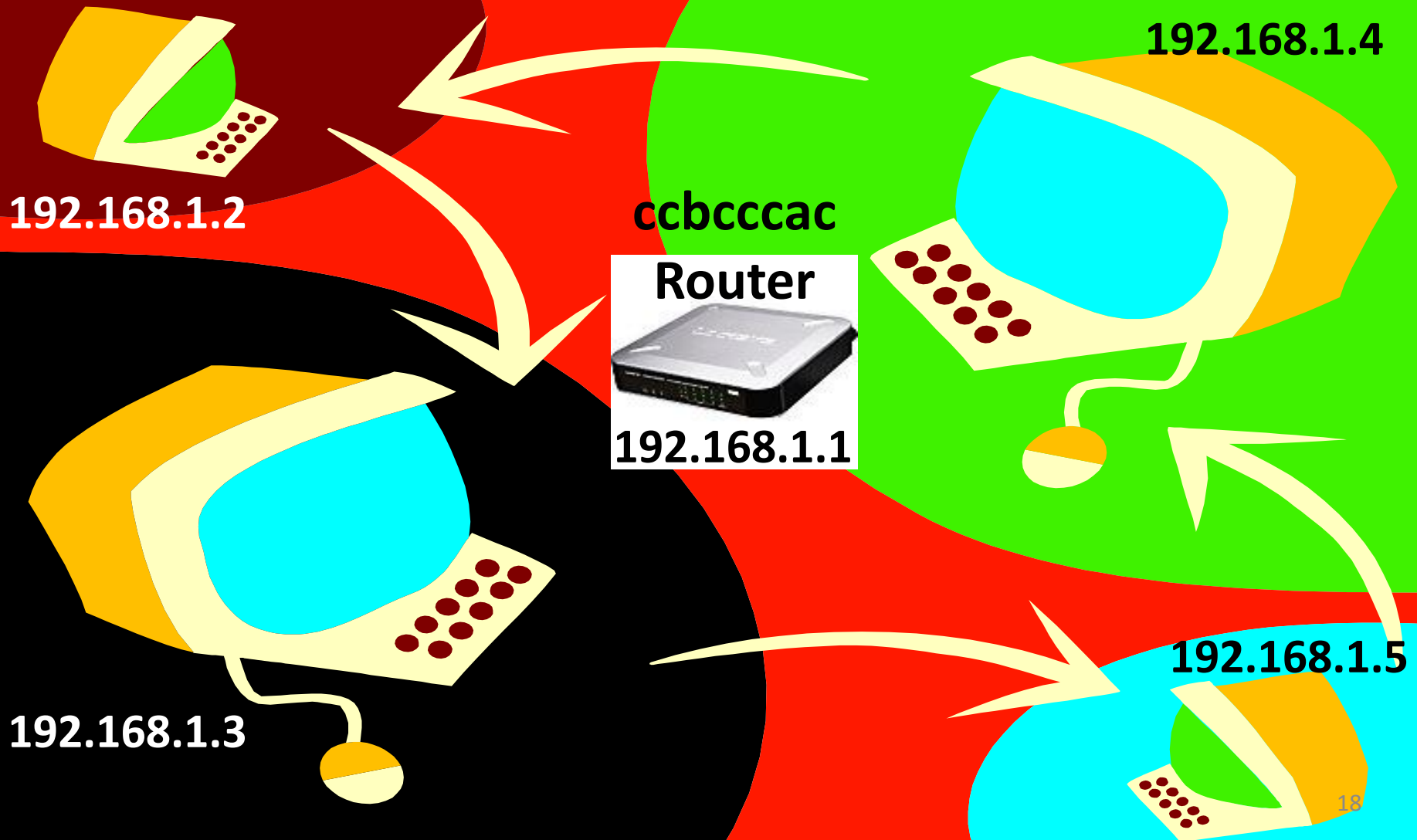# CISW101 Web Scripting Languages - Fall 2012

- **Increase in Students' Success Rate:**
  - Fall 2012: 85.74
  - Fall 2011: 47.05
  - Fall 2010: 68.22

- **More Perfect Attendance:**
  - Fall 2012: 78.57%
  - Fall 2011: 35.29%
  - Fall 2010: 31.57%

CISW101 Web Scripting Languages - Fall 2012

- Students Researched to Find Solutions for Linux Configuration Problems

- Students Researched and Found Online Tutorial and Reference Websites for HTML, JavaScript, PHP

- More Advance Topics Were Taught in the Class

CCBC Wireless Network at CCAC Summer Academy

192.168.1.4

192.168.1.2

ccbcccac
Router
192.168.1.1

192.168.1.5

192.168.1.3

CCBC Wireless Network
at CCAC Summer Academy

CISW101 Web Scripting Languages Students' Final Projects

- Hillary Shames: **192.168.1.2**
  - Phi Calculator, Tiger, Rock/Paper/Scissors Game, Server Information (HTML 5, JavaScript, PHP)

- Chris Knouff : **192.168.1.2**
  - Age Comparison (Client/Server – PHP)

- Gary Cole: **192.168.1.3**
  - Number Guessing Game (JavaScript)

- Michael Hertweck : **192.168.1.4**
  - Shopping List (Client/Server - PHP)

Revised Web Programming Curriculum 2013

New Web Programming Curriculum Highlights

- Web Programming curriculum provides students with theoretical and hands-on experience in:
  - Software Application Tools
  - Web Programming Languages
  - Database Management Systems
  - Website Design and Development
  - E-Commerce Applications

Revised Web Programming Curriculum 2013

First Semester

- CIST100 Intro to IT
- CISW101 Web Scripting Languages
- CIST160 Visual Basic
- VISC115 Digital Imaging
- WRIT101 English Comp I

Second Semester

- CISN200 Client OS
- CIST106   Software Productivity Tools
- CISW205 Program in C#
- CISW206 Web Data Connectivity using ASP and PHP
- LITR210 Concepts of Lit Or WRIT103 Writing for Business and Tech

Revised Web Programming Curriculum 2013

Third Semester

- CISN205 Server OS
  Or
- CISN203 Linux OS
- CIST170 Website Development
- CISW201 Java I
- MATH110 Business Math
  Or Science Elective
- CISW214 Database: SQL and Crystal Report

Fourth Semester

- CISW217 Mobile App. Development
- CISW202   Java II
- CISW210 E-Commerce Applications
- SOCI101 Principles of Sociology
  Or PSYC101 General Psych
- CIST260 Internship
  Or VISC122 Web Design

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New Linux Server and Benefited Curricula

- **Web Programming Degree**
- **Web Programming Certificate**
- **Visual Communications: Web Design Degree**
- **Visual Communications: Web Design Certificate**
- **Networking Degree**
- **Networking Certificate**
- **Cyber Security Degree**
- **Computer Support Specialist Certificate**

Presenters' Contact Information

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