

Web Application Team (V04)

Description

The team will create a database-driven Website with server-side functionality. The team is provided with the opportunity to design, build and present a working web application. Teams will be further required to formally present their project to a panel of judges via videoconference, and the presentation will be judged independently of the project's technical merits.

Eligibility

- Any Business Professionals of America student member may enter this event.
- A team will consist of 2-4 members.
- There are no restrictions on number of entries per chapter or per state.

Event Registration

- Advisors register teams for the event using the Membership Registration System, accessible at <http://www.bpa.org/membership/regsystem>.
- The event can be added to your invoice using step 4, "Virtual Event Registration." Enter the names of all team members into the "notes" field.
- Event registration can be purchased with your original invoice or with a new invoice after member registration.
- Registration deadline is November 16, 2016.

Entry Fee

There will be a \$20 fee for each entry (invoiced during event registration).

Topic

Where in the World Do You Want to Go?

You are developing a website for a travel company. Your mission is to create a travel website. This website will be a mashup of technology from various sources providing information to a prospective traveler about a location of their choosing. The site should inform the visitor about your travel company, types of services your company will provide, allow the visitor to select a travel location and present information about that location. The site may include the information of your choosing such as current local weather, activities, travel conditions, popular attractions, lodging and transportation information and special offers.

In addition, think about what types of features a travel site should include such as:

- Reservation application
- Photo gallery
- Videos gallery
- Currency converter
- Contact information
- Trip planning calendar

The project should be documented, easy for the visitor to navigate and understand. Create a clever name for your travel company, be creative and imaginative! Most of all have fun with the project!

Competencies

- Demonstrate database development and structured query language (SQL) skills
- Demonstrate application security features
- Demonstrate knowledge of server side scripting and Internet concepts

- Evaluate and delegate responsibilities needed to perform required tasks
- Demonstrate teamwork skills needed to function in a business setting
- Apply database development skills in order to create the back-end of the web application
- Apply Web design skills and standards in order to complete the front-end of the website
- Implement problem-solving techniques
- Describe the process, methodology, and lifecycle of your Web application
- Create an audit trail of how you built your application

Teams who do not submit an entry that follows this topic will be disqualified.

Specifications

- Final projects must be uploaded to a file sharing site (Dropbox, etc.) and should include:
 - a written description of the application as a .pdf file
 - the source code (as a zipped root folder)
 - the database schema
- It is recommended that you set the access level of your project to one of BPA's recommended settings. See page 15 for settings recommendations.
- Submit the [Team Entry Form](#), including the URL to the project and [Release Form\(s\)](#) in a combined PDF document to <http://www.bpa.org/submit> no later than 11:59 p.m. Eastern Time on February 22, 2017.
- Contestants will receive an automated response confirmation at the time of submission. Individual confirmation of receipt cannot be provided by the National Center.
- No fax or mailed copies will be accepted.
- No exceptions can be made for missed deadlines due to incorrect submission or technical difficulties.
- Multiple submissions cannot be accepted.
- No changes can be made to the project after the date of submission.
- The website must be available for viewing on the Internet on February 22, 2017. If the ISP is experiencing technical difficulty, the advisor will be contacted and a reasonable amount of time will be provided to solve the problem. No changes can be made to the website after this date. Technical judging of the website will be conducted prior to the NLC.
- The following information must be included in the website: chapter name and number, team member names this information can be included in any format and location.
- The team members must create the conceptual model for the database identifying relationships between tables in the database. Each team will be expected to articulate the design of the database associated with the web application.
- Each team must create forms and associated considerations needed for the scenario.
- Teams may select the database, web server, and middleware solution they prefer. A careful review of the evaluative criteria presented in the competition guidelines will aid in the selection of development technologies. The source code that powers each team's web application will be scrutinized; therefore, it is imperative that team members are capable of answering questions regarding this aspect of the application.
- It is the policy of Business Professionals of America to comply with state and Federal copyright law. Federal law pertaining to copyright, as contained within the United States Code, is available at <http://www.copyright.gov/title17/circ92.pdf>. The [Style & Reference Manual](#) contains guidelines for Copyright and Fair Use. Participant(s) will be DISQUALIFIED for violations of the guidelines.
- National Business Professionals of America *grants permission* for the use of the copyrighted logo and tagline.

- The event tests the team's ability to write code and incorporate database. As such, application frameworks, such as Drupal, Joomla, DotNetNukes and WordPress cannot be used. IDE's such as Microsoft® Visual Studio/ASP and Dreamweaver are acceptable. Packages that assist the developer to create components, menus and similar such as JavaScript, JQuery and Ajax are acceptable and encouraged. However, downloading third party code to create a major component of a web application, such as a shopping cart in an e-commerce application, is not permissible.
- Code must be original work of team.
- Teams' advisors will be contacted to reserve a time for a videoconference presentation before a panel of judges. Presentation reservations will only be granted to teams that have met all previous deadlines and submitted a completed project in full; e-mail confirmation will sent to those teams eligible to reserve a presentation time. The dates and times for presentation reservations will be announced via e-mail notification.
- The ten teams with the highest cumulative technical and presentation scores will be invited to attend the National Leadership Conference to be recognized for their outstanding efforts and to participate in the National Showcase. See <http://www.bpa.org/nlc/nationalshowcase> for more information.
- The top ten teams may participate in the Virtual Event Forum for all participants and advisors.

Method of evaluation

Application

Technical Judges' Rating Sheet

Presentation Judges' Rating Sheet

Length of event

No more than three (3) minutes set-up

No more than ten (10) minutes presentation time

No more than ten (10) minutes judges' questions

Please note: Those teams who wish to receive judges' comments must submit an e-mail address at the time of submission.

This event sponsored by:



Web Application Team (V04)

Judge Number _____

Team Number _____

Items to Evaluate	Below Average	Average	Good	Excellent	Points Awarded
TECHNICAL POINTS					
Page Design					
Visual organization is easily understood	1-5	6-10	11-15	16-20	
Aesthetic use of colors and fonts	1-5	6-10	11-15	16-20	
Images and page file size have been optimized for performance	1-5	6-10	11-15	16-20	
Grammar, Spelling, Punctuation, and Usage	1-5	6-10	11-15	16-20	
Sufficient contrast between text and background color	1-5	6-10	11-15	16-20	
Total Page Design Points (100 points maximum)					
Customer Functionality					
Navigational links consistent and working	1-5	6-10	11-15	16-20	
End-user instructed on the proper formatting for forms and given feedback upon submission	1-5	6-10	11-15	16-20	
Cross-browser & cross platform compatibility	1-5	6-10	11-15	16-20	
Ability to utilize a search feature	1-5	6-10	11-15	16-20	
Total Customer Functionality Points (80 points maximum)					
Database Development					
A relational database is employed (<i>as opposed to flat file</i>)	1-5	6-10	11-15	16-20	
Conceptual model correctly implemented.	1-5	6-10	11-15	16-20	
Minimal data redundancy in tables	1-5	6-10	11-15	16-20	
Sensitive data encrypted in the database	1-5	6-10	11-15	16-20	
Database access is controlled through passwords, access control lists etc.	1-5	6-10	11-15	16-20	
Use of unique key concepts are employed	1-5	6-10	11-15	16-20	
Total Database Development Points (120 points maximum)					
Application Design					
A System/Application diagram was created and employed	1-5	6-10	11-15	16-20	
Maintains state through sessions with and without cookies	1-5	6-10	11-15	16-20	
Encrypts highly sensitive user information	1-5	6-10	11-15	16-20	
Forms fields are validated before submission	1-5	6-10	11-15	16-20	
SQL queries and/or stored procedures are utilized	1-5	6-10	11-15	16-20	
Error capture routines are employed where needed	1-5	6-10	11-15	16-20	
Total Application Design Points (120 points maximum)					

TECHNICAL POINTS CONTINUED					
Administration					
Items to Evaluate	Below Average	Average	Good	Excellent	Points Awarded
Appropriate Web-based reports are generated for the application	1-5	6-10	11-15	16-20	
Administrator has the ability to add, modify and delete data through a password protected Web interface	1-5	6-10	11-15	16-20	
Code is documented	1-5	6-10	11-15	16-20	
Total Administration Points (60 points maximum)					
Application functions as indicated (it works)					
Reports generate accurate results	1-5	6-10	11-15	16-20	
Search functions return accurate results	1-5	6-10	11-15	16-20	
Administration functions work as indicated (add, modify, delete)	1-5	6-10	11-15	16-20	
Security functions as it should	1-5	6-10	11-15	16-20	
Total Application Points (80 points maximum)					
TOTAL TECHNICAL POINTS (560 points maximum)					

Web Application Team (V04)

Judge Number _____

Team Number _____

Presentation Scoring Rubric

	Below Average	Average	Good	Excellent	Points Awarded
PRESENTATION POINTS					
Ability to explain development/design process	1-5	6-10	11-15	16-20	
Ability to demonstrate how the application works through the use of the User Interface	1-5	6-10	11-15	16-20	
Ability to explain the logical design of application and design patterns used	1-5	6-10	11-15	16-20	
Ability to explain the code structures that perform front end and backend functionality	1-5	6-10	11-15	16-20	
Offered clear and direct responses to interview questions	1-5	6-10	11-15	16-20	
Grammar, Spelling, Punctuation, and Usage	1-5	6-10	11-15	16-20	
Presentation quality/style	1-5	6-10	11-15	16-20	
TOTAL PRESENTATION POINTS (140 points maximum)					

SPECIFICATION POINTS: All points or none per item are awarded per item.		Points Awarded
Equipment set-up lasted no more than three (3) minutes	5	
Presentation lasted no more than ten (10) minutes	10	
Team prepared appropriate equipment and documentation prior to presentation	5	
TOTAL PRESENTATION SPECIFICATION POINTS (20 points)		

TOTAL MAXIMUM POINTS = 720