

## Web Application Team (54)

### Description

The team will create a database-driven Web site with server-side functionality. The team is provided with the opportunity to design, build and present a working web application.

### Eligibility

Any student may enter this event. A team will consist of 2-4 members. Students participating in National Level Competition must be registered for the event prior to submission deadline for technical judging.

<p><b>Team must supply</b></p> <p>One (1) desktop/laptop computer/server: This computer will function as a server and should meet the minimum system requirements associated with the software that each team chooses. A monitor, keyboard, mouse, and cables should accompany the server to the presentation site.</p> <p>One (1) desktop/laptop computer (optional): This computer may be networked directly to the server for the purposes of demonstrating the application. A monitor, keyboard, mouse, and cables should accompany the desktop/laptop to the presentation site.</p> <p>The web server and database server software that powers the web application may be loaded on the same machine utilized to demonstrate the application. This enables the team to demonstrate their application using only one computer, reducing the amount of setup time needed and simplifies transportation of equipment. However, some Microsoft® server products cannot launch without an active network connection with which to bind.</p> <p>The team must bring all supporting devices (e.g., extension cords, power supply, etc.).</p> <p><b>Optional</b> Projector / Props</p>	<p><b>Business Professionals of America assumes no responsibility for hardware/software provided by the contestant.</b></p> <p><b>No equipment, supplies, or materials other than those specified for an event will be allowed in the testing area.</b></p> <p><b>No previous Business Professionals of America tests and/or sample tests or facsimiles thereof (handwritten, photocopied, or keyed) may be taken into the testing area. <u>Violation of this rule will result in disqualification.</u></b></p>
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### 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 web site
- Implement problem-solving techniques
- Describe the process, methodology, and life cycle of a web application

### Specifications:

- The Web Application Team Submission Form (as a pdf file) and the source code (as a pdf file) must be submitted to the National Center by e-mail at **webapp@bpa.org** no later than 11:59 pm Eastern Time on April 1, 2010. The subject line of the message should be "Web Application Team - *chapter number*." The use of e-mail delivery receipt is encouraged, as **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 misspelled e-mail address.**
- **Contestants must be registered for National-level competition prior to submission of materials. The chapter number must be included as indicated. Materials from non-registered contestants and/or those missing chapter number cannot be accepted.**
- No changes can be made to the project after the date of submission.
- **A copy of the Web Application Documentation Form and Release Form(s) must be presented at the time of the presentation at the NLC at both Preliminary and Final Competition.**
- The web site must be available for viewing on the Internet on April 1, 2010. 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 web site after this date. Technical judging of the web site will be conducted prior to the NLC. The team will administer and present their application at the NLC.
- The following information must be included in the web site: chapter name and number, team member names, school, city, state, and year. 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.
- Produce 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.
- Pre-designed templates, packages and frameworks may not be used in any capacity.
- Code must be the original work of the team.
- It is the policy of Business Professionals of America to comply with the Copyright Law of the United States of America, Title 17, Circular 92. Refer to the Copyright and Fair Use Guidelines in the *Style & Reference Manual*. **Contestant(s) will be DISQUALIFIED for violations of the Copyright and Fair Use Guidelines.**

### Topic

Create a social networking site. It may resemble popular social networking sites such as "YouTube", "Facebook", "MySpace", "Twitter", web-blogs, etc. However, the site should not be a duplicate (clone) of such sites and must be of your own design.

**Contestants who submit an entry that does not follow this topic will be disqualified.**

### Method of evaluation:

- Application (judges' rating sheet)

### Length of event:

- No more than five (5) minutes for team set-up
- No more than ten (10) minutes for presentation
- No more than five (5) minutes for judges' questions
- Finals may be included at State and National levels.

### Entries:

- Each state is allowed two (2) entries.

## Web Application Team (54) Submission Form

Key the information below and check the address for accuracy. NO HANDWRITTEN FORMS WILL BE ACCEPTED.

**Chapter Name:** \_\_\_\_\_ **Chapter Number:** \_\_\_\_\_

**Team Members:** \_\_\_\_\_

**Complete web site/URL address:** \_\_\_\_\_

**Alternate web site/URL address (if applicable):** \_\_\_\_\_  
\_\_\_\_\_

**Password (if applicable):** \_\_\_\_\_

## Web Application Team (54) Documentation Form

Key the information below and check the address for accuracy. NO HANDWRITTEN FORMS WILL BE ACCEPTED.

**Chapter Name:** \_\_\_\_\_ **Chapter Number:** \_\_\_\_\_

**Team Members:** \_\_\_\_\_

**Complete web site/URL address:** \_\_\_\_\_

**Alternate web site/URL address (if applicable):** \_\_\_\_\_

**Password (if applicable):** \_\_\_\_\_

We, the undersigned, attest that the coding, design, creation, and implementation of this web site are the original work of the team members. Furthermore, we attest that the web site is in accordance with Copyright and Fair Use Guidelines.

We consent to its reproduction, use, and/or modification in any way for use by Business Professionals of America.

We, the undersigned, attest that no changes will be made to our web site after the postmarked date.

Team Member Signatures:

Team Member Roles:

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

3. \_\_\_\_\_

\_\_\_\_\_

4. \_\_\_\_\_

\_\_\_\_\_

Advisor signature and contact information during technical judging:

**Signature:** \_\_\_\_\_

**E-mail:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**Business Professionals of America  
Web Application Team (54)**

**Web Application Team Release Form**

I hereby consent irrevocably to the use and reproduction of any and all photographs taken of me in any form whatsoever for the Business Professionals of America Web Application Team competition. Consent is also granted for any printed matter used in conjunction with the photograph(s) and with the use of my name in any part of the Web Applications Team's web site.

I have read this document and am fully aware of the content and implications, legal and otherwise.

Please print the following:

\_\_\_\_\_  
**Student Name**

\_\_\_\_\_  
**Address**

\_\_\_\_\_  
**City, State, ZIP**

Signature(s):

\_\_\_\_\_  
**Student Signature**

Date \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
(Month) (Day) (Year)

\_\_\_\_\_  
**Signature of Parent or Guardian  
(If student is under 18 years of age)**

Date \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
(Month) (Day) (Year)

## Web Application Team (54) Technical Judges' Scoring Rubric/Rating Sheet

Judge Number \_\_\_\_\_

Contestant Number \_\_\_\_\_

Items to Evaluate	Below Average	Average	Good	Excellent	Points Earned
<b>Page Design (30 points)</b> <ul style="list-style-type: none"> <li>• Visual organization is easily understood</li> <li>• Aesthetic use of colors and fonts</li> <li>• Images and page file size have been optimized for performance</li> </ul>	1-3 1-3 1-3	4-5 4-5 4-5	6-7 6-7 6-7	8-10 8-10 8-10	
<b>Customer Functionality (40 points)</b> <ul style="list-style-type: none"> <li>• Navigational links consistent and working</li> <li>• End-user instructed on the proper formatting for forms and given feedback upon submission</li> <li>• Cross-browser &amp; cross platform compatibility</li> <li>• Ability to utilize a search feature</li> </ul>	1-3 1-3 1-3 1-3	4-5 4-5 4-5 4-5	6-7 6-7 6-7 6-7	8-10 8-10 8-10 8-10	
<b>Database Development (40 points)</b> <ul style="list-style-type: none"> <li>• Conceptual model correctly implemented</li> <li>• Minimal data redundancy in tables</li> <li>• Sensitive data encrypted in the database</li> <li>• Database access is controlled through passwords, access control lists, etc.</li> </ul>	1-3 1-3 1-3 1-3	4-5 4-5 4-5 4-5	6-7 6-7 6-7 6-7	8-10 8-10 8-10 8-10	
<b>Application Design (150 points)</b> <ul style="list-style-type: none"> <li>• Maintains state through sessions with and without cookies</li> <li>• Encrypts highly sensitive user information</li> <li>• Forms fields are validated before submission</li> <li>• Conditional logic is used to qualify SQL queries before executing them</li> <li>• Code is original and not a pre-built application or an open-source application</li> </ul>	1-7 1-7 1-7 1-7 1-7	8-15 8-15 8-15 8-15 8-15	16-22 16-22 16-22 16-22 16-22	23-25 23-25 23-25 23-25 23-25	
<b>Administration (70 points)</b> <ul style="list-style-type: none"> <li>• Appropriate Web-based reports are generated for the application</li> <li>• Administrator has the ability to add, modify and delete data through a password protected Web interface</li> </ul>	1-9 1-9	10-18 10-18	19-27 19-27	28-35 28-35	
<b>Grammar, Spelling, Punctuation, and Usage (25 points)</b>	0 (3+ errors)	5 (2 errors)	15 (1 error)	25 (0 errors)	
<b>TOTAL POINTS (330 maximum)</b>					

## Web Application Team (54)

### Preliminary Presentation Judges' Scoring Rubric/Rating Sheet

Judge Number \_\_\_\_\_

Contestant Number \_\_\_\_\_

Items to Evaluate	Below Average	Average	Good	Excellent	Points Earned
Ability to explain development/design process	1-9	10-18	19-27	28-35	
Ability to demonstrate how the application works by manipulating data utilizing the web application/interface	1-7	8-15	16-22	23-30	
Ability to explain their structure of the data in the database and the programmatic structures that manipulate the data	1-7	8-15	16-22	23-30	
Evidence showing each team member's role in the development of the site and their responses to interview questions	1-9	10-18	19-27	28-35	
<b>TOTAL POINTS (130 maximum)</b>					

<b>PRESENTATION SPECIFICATION POINTS:</b> All points or none are awarded by the proctor per team, not per judge.		
• Equipment set-up lasted no more than five (5) minutes	5	
• Presentation lasted no more than five (5) minutes	10	
• Appropriate equipment and documentation for the interview	5	
• All registered team members present for the entire event (awarded if same members are present for all portions of the test)	20	
<b>TOTAL PRESENTATION SPECIFICATION POINTS (40 points)</b>		

**TECHNICAL SCORE TOTALS:**

(330 points maximum) \_\_\_\_\_

**PRELIMINARY PRESENTATION TOTALS:**

**Judge 1** (130 points maximum) \_\_\_\_\_

**Judge 2** (130 points maximum) \_\_\_\_\_

**PRESENTATION TOTALS  
DIVIDED BY NUMBER OF JUDGES** \_\_\_\_\_

**PRESENTATION SPECIFICATION  
POINTS**  
(40 points maximum) \_\_\_\_\_

**TOTAL (500 points maximum)** \_\_\_\_\_

**RANK** \_\_\_\_\_

## Web Application Team (54)

### Final Presentation Judges' Scoring Rubric/Rating Sheet

Judge Number \_\_\_\_\_

Contestant Number \_\_\_\_\_

Items to Evaluate	Below Average	Average	Good	Excellent	Points Earned
Ability to explain development/design process	1-9	10-18	19-27	28-35	
Ability to demonstrate how the application works by manipulating data utilizing the web application/interface	1-7	8-15	16-22	23-30	
Ability to explain their structure of the data in the database and the programmatic structures that manipulate the data	1-7	8-15	16-22	23-30	
Evidence showing each team member's role in the development of the site and their responses to interview questions	1-9	10-18	19-27	28-35	
<b>TOTAL POINTS (130 maximum)</b>					

<b>PRESENTATION SPECIFICATION POINTS:</b> All points or none are awarded by the proctor per team, not per judge.		
• Equipment set-up lasted no more than five (5) minutes	5	
• Presentation lasted no more than five (5) minutes	10	
• Appropriate equipment and documentation for the interview	5	
• All registered team members present for the entire event (awarded if same members are present for all portions of the test)	20	
<b>TOTAL PRESENTATION SPECIFICATION POINTS (40 points)</b>		

**FINAL PRESENTATION TOTALS:**

**Judge 1** (130 points maximum) \_\_\_\_\_

**Judge 2** (130 points maximum) \_\_\_\_\_

**PRESENTATION TOTALS  
DIVIDED BY NUMBER OF JUDGES** \_\_\_\_\_

**PRESENTATION SPECIFICATION  
POINTS**  
(40 points maximum) \_\_\_\_\_

**TOTAL (170 points maximum)** \_\_\_\_\_

**RANK** \_\_\_\_\_

# Web Application Team (54) Judges' Scoring Rubric/Rating Sheet

Judge Number \_\_\_\_\_

Team Number \_\_\_\_\_

**COMMENTS: (to be viewed by team)**

(Judges: please provide positive feedback and areas of improvement in a constructive manner regarding your analysis of the team's competition.)

**REASON FOR DISQUALIFICATION: (if applicable)**