Coding and Programming *(formerly Desktop Application Programming)*

Certain types of accounting processes require that each record in the file be processed. Coding and Programming focuses on these procedural style processing systems. This event tests the programmer's skill in designing a useful, efficient, and effective program in the area described below.

Competencies

This event consists of two (2) parts: a prejudged program and a performance component. The program must address the topic given.

Project Competencies
- development of topic is logical and creative
- code is commented at appropriate points
- interface is a logical arrangement and contains all necessary information
- program runs without error

Performance Competencies
- explain content logically and systematically
- understanding of the programming logic and coding is evident
- design process effectively communicated
- tips, techniques, and tools used are presented including identifying the most difficult programming task(s) completed and explanation of the scenario/logic used to overcome and implement these tasks
- professional presentation
- self-confidence apparent through the knowledge of content and articulation of ideas
- answer questions effectively

Business Education Curriculum Standard(s):
Information Technology; Management

2018 Topic

Develop a database program to manage the issuance of books at a school library. Give the school a name. The program must be able to complete a minimum of the following tasks:
- Track student and teacher names with ability to enter/view/edit names.
- Track the issuance of books for a student or teacher.
- Manage different limits for the number of books that can be issued to a student or teacher.
- Manage the number of days that students and teachers can check out any book. (Hint: Mostly like the number of days will differ for students and teachers).
- Give each book a different ID. Also, each book of same name and same author (but number of copies) will have different ID.
- Generate/print weekly report to show books issued to whom and number of days leading to the due date return.
- Generate/print weekly report of detail of fines (when book not returned on time).

State Eligibility

Each local chapter may enter two (2) programs. Only one member may create the program. The local chapter must be on record in the Pennsylvania state and the FBLA-PBL national offices as having paid dues by January 31 of the current school year. **Members participating in this event may not compete in another competitive event at a Region Leadership Conference.**

This event consists of two (2) parts: a prejudged program and a performance component. **Participant(s) are required to complete both parts.** The top 10 rated programs from among those submitted will be required to give an oral presentation at the SLC.

At the State Leadership Conference, the chapter adviser must confirm students' participation in the event. Participants who are not confirmed will be disqualified.

State Regulations

Prejudged Program

1. The program must address the topic given, and can be created using any programming language.

2. The upload must contain the executable object, data, program documentation (including but not limited to, execution instructions, system requirements, and text files for all program code—see http://en.wikipedia.org/wiki/Software_documentation), and support files needed to run the executable file must be received by the deadline at the www.pafbla.org/importantdates.php page.

3. A Statement of Assurance and event entry form must be included.

4. Entries will be judged according to the rating sheet.

5. The solution must run stand-alone with no programming errors.

6. The program must be designed so that the program will run when copied to a hard drive with this path.

7. Program must run on Windows XP or higher.

8. Data must be free of viruses/malware. Any entry with contaminated data will not be judged.

9. The program must be prepared by the participant without help.

State Procedure

1. The event consists of two parts: (1) submission of a program, and (2) performance.

2. At the State Leadership Conference, the chapter adviser must confirm students' participation in the event. Participants who are not confirmed will be disqualified.

3. Participants are required to complete both parts to be eligible to win an award

Preconference Requirements

1. The participant(s) must submit the following items:
   a. An event entry form, which is posted on the PA FBLA web site, certified by the local chapter adviser.
   b. Statement of Assurance.
   c. Programs must be uploaded by the chapter adviser and received by the deadline posted on the www.pafbla.org website. Chapter advisers must request Dropbox access from the PA FBLA Executive Director prior to the deadline; specific instructions regarding the upload will be sent directly to the chapter adviser.

2. **The materials must be received by the PA FBLA Executive Director/State Chairman by the deadline date published** at www.pafbla.org/importantdates.php**, which is posted on the PA FBLA web site. Failure to submit these documents by the received by date will result in the participants being disqualified**.

Oral Presentation

1. Performances should describe the program completely. Specifically, the performance should address the program creation, processes used, and results of the program.

2. The top ten (10) individuals will be scheduled for a final presentation at the SLC.

3. Presentation of the entry must be conducted by the participant who authored the event.

4. Five (5) minutes will be allowed to set up and remove equipment or presentation items.

5. The chapter must provide the computer for the event. A LCD projector, screen, table, and electrical power will be provided on-site.

6. The participant is responsible for bringing a copy of the program.

7. Visual aids and samples related to the project may be used; however, no items may be left with the judges or audience.

8. The individual must perform all aspects of the presentation (e.g., speaking, set-up, operating audiovisual equipment). Other representatives of the chapter may not provide assistance.

9. The individual will have seven (7) minutes to describe the program.

10. At the end of six (6) minutes, a timekeeper will stand until noticed and hold up a colored time card indicating one minute is left, and at seven (7) minutes the timekeeper will stand and hold up a colored time card indicating time is up. When the presentation is finished, the timekeeper will record the time used, noting a deduction of five (5) points for any time over seven (7) minutes.

11. Following each presentation, the judges will conduct a three-minute (3) question-and-answer period.

12. The performance is open to all conference attendees, except performing participants of this event. If participants of the event view other presentations before or after their scheduled presentation time, they (or their team if they are part of one) will be disqualified.

13. **The participant must comply with the PA FBLA Dress Code which can be found at www.pafbla.org/dresscode.php. If the participant does not comply, he or she will not be admitted to the oral presentation areas until he or she is in compliance.**

State Judging

Reports will be screened to determine if chapters have complied with event eligibility and regulations. A panel of judges will then select the winners, and all decisions of the judges are final.

If there is a tie after the pre-judged program portion in order to determine the top 10 finalists advancing to the SLC, ties will be broken based on the following:
First Tiebreaker
- Total points of the *Results* section on the Production Rating Sheet.
Second Tiebreaker
- Total points of the *Program Readability and Style* section on the Production Rating Sheet.
Third Tiebreaker
- Total points of the *Program Structure and Content* section on the Production Rating Sheet.
Tiebreaker implementation examples can be found in this handbook or at www.pafbla.org/tiebreakers.php.

If there is a tie after the pre-judged program portion and the oral presentation portion of the event, ties will be broken based on the following:
First Tiebreaker
- Total points of the *Production* Rating Sheet.
Second Tiebreaker
- Total points of the *Content* section on the Performance Rating Sheet.
Third Tiebreaker
- Total points of the "Demonstrates the ability to effectively answer questions" category within the *Delivery* section on the Performance Rating Sheet.
Tiebreaker implementation examples can be found in this handbook or at www.pafbla.org/tiebreakers.php.

State Awards

The state will present a maximum of ten (10) awards at the State Leadership Conference.

National Conference Eligibility

The first-, second-, third-, and fourth-place award winning projects at the State Leadership Conference are eligible for entry at the National Leadership Conference. All NLC qualifiers will be expected to present a seven-minute (7) oral presentation of the project at the NLC. Advisers and participants should refer to the latest edition of the National Chapter Management Handbook for official National Leadership Conference event guidelines.

In the event that the local chapter of the first-, second-, third-, or fourth-place winning project cannot attend the National Leadership Conference or does not wish to have its project submitted for competition at the National Leadership Conference, it is the responsibility of the:

local chapter adviser
- to contact the PA FBLA Executive Director/State Chairman about not participating at the National Leadership Conference.

PA FBLA Executive Director/State Chairman
- to contact the next eligible award winner about participating at the National Leadership Conference.

CODING AND PROGRAMMING
Production Rating Sheet
Revised 2017-18

	Not Demonstrated	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
Program Readability and Style					
Appropriate identifiers used for variables, constants, arrays, objects, etc.	0	1-7	8-14	15-20	
Commentary provided is readable, useful, and complete	0	1–7	8–14	15–20	
General program documentation is readable, useful, and complete	0	1–7	8–14	15–20	
Program Structure and Content					
Program is concise, does not contain unnecessary complexity	0	1–7	8–14	15–20	
Data storage is appropriate	0	1–7	8–14	15–20	
Program use follows a logical sequence	0	1-7	8-14	15-20	
Usability and Results					
Program use and navigation	0	1–7	8–14	15–20	
Program results	0	1-14	15-21	22-30	
Output results	0	1–14	15-21	22-30	
Subtotal					**/200 max.**
Penalty Points: Deduct five (5) points for not adhering to Guidelines					
Total Points					**/200 max.**

Name: _____

School: _____   Region: _____

Judge's Signature: _____   Date: _____

Judge's Comments:

CODING AND PROGRAMMING
Performance Rating Sheet
Revised 2017-18
   ❏ **Final Round**

	Not Demonstrated	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
Expectation Item					
Demonstrates understanding of the event topic	0	1-3	4-7	8-10	
Explains the planning process used to design the program	0	1-7	8-14	15-20	
Describes user interface (input/output parameters)	0	1-7	8-14	15-20	
Describes the program flow, structure, and usefulness	0	1-10	11-20	21-30	
Delivery Skills					
Statements are well-organized and clearly stated	0	1–2	3–4	5	
Demonstrates self-confidence, poise, assertiveness, and good voice projection	0	1–2	3–4	5	
Demonstrates the ability to effectively answer questions	0	1–3	4–7	8–10	
Subtotal					**/100 max.**

Time Penalty Deduct five (5) points for presentation over seven (7) minutes. Time:	
Dress Code Penalty Deduct five (5) points when dress code is not followed.	
Penalty Deduct five (5) points for event guidelines not followed.	
Total Points	**/100 max.**
Prejudged Score	**/200 max.**
Final Score (add total score and prejudged score)	**/300 max.**

Name: _____

School: _____   Region: _____

Judge's Signature: _____   Date: _____

Judge's Comments: