Coding & Programming



Coding & Programming provides members with the opportunity to design and implement a standalone application to accomplish a task. This competitive event consists of a presentation component.

Event Overview

Division: High School

Event Type: Team of 1, 2 or 3 members

Event Category: Presentation

Event Elements: Presentation with a Topic

Presentation Time: 3-minute set-up, 7-minute presentation time, 3-minute question & answer

time

NACE Connections: Career & Self-Development, Critical Thinking, Communication,

Leadership, Professionalism, Teamwork, Technology

2024-25 Topic

Create a program that helps students manage their personal finances by tracking account balances, income and expenses. The program should allow users to input details about their income sources and expenses, including the amount, category, and date of each transaction. It should provide features to view the current balance, generate summaries of income and expenses over specified periods (e.g., weekly, monthly), and categorize expenses to show spending patterns. Additionally, the program should include functionality to update or delete existing entries and offer search and filter options to easily find specific transactions.



This topic was created in partnership with code.org. Learn more about code.org, resources available, and expanding computer science in your school or district at <u>this link</u>.

District/Region/Section

Check with your District/Region/Section leadership for District/Region/Section-specific competition information.

State

Check with your State Leader for state-specific competition information.

National

Required Competition Items

	Items Competitor Must Provide	Items FBLA Provides
Preliminary Presentation	 Technology and presentation items Conference-provided nametag Photo identification Attire that meets the FBLA Dress Code 	TableInternet access





	Items Competitor Must Provide	Items FBLA Provides		
Final	 Technology and presentation 	• Table		
Presentation	items	 Internet access 		
	 Conference-provided nametag 	Power		
	 Photo identification 	 Projector with HDMI 		
	 Attire that meets the <u>FBLA Dress</u> 	cord		
	Code	Projector screen		

Important FBLA Documents

• Competitors should be familiar with the Competitive Events <u>Policy & Procedures Manual</u>, <u>Honor Code</u>, <u>Code of Conduct</u>, and <u>Dress Code</u>.

Eligibility

- FBLA membership dues are paid by 11:59 pm Eastern Time on March 1 of the current school year.
- Members may compete in an event at NLC more than once if they have not previously
 placed in the top ten of that event at NLC. If a member places in the top ten of an
 event at NLC, they are no longer eligible to compete in that event.
- Members must be registered for the NLC and pay the national conference registration fee to participate in competitive events.
- Members must stay in an official FBLA hotel block to compete.
- Each state may submit four entries.
- Each competitor can only compete in one individual/team event and one chapter event (American Enterprise Project, Community Service Project, Local Chapter Annual Business Report, Partnership with Business Project).
- Only competitors are allowed to plan, research, prepare, and set up their presentations.
- Each competitor must compete in all parts of an event for award eligibility.
- All members of a team must consist of individuals from the same chapter.
- Picture identification (physical or digital: driver's license, passport, state-issued identification, or school-issued identification) matching the conference nametag is required when checking in for competitive events.
- If competitors are late for their assigned presentation time, they will be allowed to compete with a five-point penalty until such time that results are finalized, or the accommodation would impact the fairness and integrity of the event.
- Some competitive events start in the morning before the Opening Session of NLC. The schedules for competitive events are displayed in the local time of the NLC location. Competitive event schedules cannot be changed.

Recognition

• The number of competitors will determine the number of winners. The maximum number of winners for each competitive event is 10.

Event Administration

- This event has two parts: preliminary presentation and final presentation
- Preliminary Presentation Information
 - o **Equipment Set-up Time:** 3 minutes

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- o **Presentation Time:** 7 minutes (one-minute warning)
- o **Question & Answer Time:** 3 minutes
- o **Internet Access:** Provided (Please note that internet reliability at any conference venue cannot be guaranteed. Always have a backup plan in case internet connections are lost or are unable to connect to your device.)
- o Competitors/teams are randomly assigned to sections.
- o The presentation is judged at the NLC. Preliminary presentations are not open to conference attendees. The presentation will take place in a large, open area, with a booth size of approximately 12' x 12'.
- o Timing: The presentation time is exclusive to the allotted times. Once the setup time has been reached, the presentation time automatically begins. The presentation time shall not exceed the stated time, meaning that the set-up and Q&A time cannot be used as presentation time.
- Technology
 - Competitors present directly from a device which includes a laptop, tablet, mobile phone, or external monitor (approximately the size of a laptop screen). Competitors can present with one or two devices. If presenting with two devices, one device must face the judges and one device must face the competitors.
 - Projectors and projector screens are not allowed for use, and competitors are not allowed to bring their own.
 - Wireless slide advancers (such as a presentation clicker or mouse) are allowed.
 - External speakers are not allowed. Only device audio can be used.
 - Power is not available.
- Non-technology Items: Materials, notecards, visual aids, and samples related to the project may be used during the presentation; however, no items may be left with the judges or audience.
- o Restricted Items: Animals (except authorized service animals), Food (for display only; may not be consumed by judges during the presentation), Links and QR codes (for display only; cannot be clicked or scanned by judges before, during, or after the presentation)
- o Teamwork: If performing as a team, all team members are expected to actively participate in the presentation.
- o Presentation should cover the following aspects of the program:
 - The development, usability and functionality of the program must be demonstrated and explained to the judges.
 - Solution must run standalone with no programming errors.
 - Data must be free of viruses/malware.
 - Competitors must provide comprehensive documentation including a readme file, source code, templates/libraries used, and documentation of any copyrighted or open-source material used.
 - The presentation should follow the rating sheet and include the following:
 - Code Quality: What are the specifics of and the big picture of the code?

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- User Experience: What focus is on the ease-of-use and accessibility of the interface?
- Functionality: Speak to all aspects of the topic
- Final Presentation Information
 - o **Equipment Set-up Time:** 3 minutes
 - o **Presentation Time:** 7 minutes (one-minute warning)
 - o **Question & Answer Time:** 3 minutes
 - o **Internet Access:** Provided (Please note that internet reliability at any conference venue cannot be guaranteed. Always have a backup plan in case internet connections are lost or are unable to connect to your device.)
 - o An equal number of top scoring competitors/teams from each section in the preliminary round will advance to the final round. When there are more than five sections of preliminary presentations for an event, two competitors/teams from each section will advance to the final round.
 - Final presentations may be open to conference attendees, space permitting.
 Finalists may not view other competitors' presentation in their event.
 - o Timing: The presentation time is exclusive to the allotted times. Once the setup time has been reached, the presentation time automatically begins. The presentation time shall not exceed the stated time, meaning that the set-up and Q&A time cannot be used as presentation time.
 - Technology
 - Competitors can present with one or two devices which includes a laptop, tablet, mobile phone, or external monitor (approximately the size of a laptop screen). If presenting with two devices, one device must be connected to the projector or facing the judges and one device must face the competitors.
 - The following will be provided for the final round if it occurs in a conference room: Projector, projector screen, power, and table.
 - Competitors using laptops or other devices that do not have an HDMI port will need to provide their own adapters.
 - It is up to final-round competitors to determine if they wish to use the technology provided.
 - Wireless slide advancers (such as a presentation clicker or mouse) are allowed
 - Non-technology Items: Materials, notecards, visual aids, and samples related to the project may be used during the presentation; however, no items may be left with the judges or audience.
 - Restricted Items: Animals (except authorized service animals), Food (for display only; may not be consumed by judges during the presentation), Links and QR codes (for display only; cannot be clicked or scanned by judges before, during, or after the presentation)
 - o Teamwork: If performing as a team, all team members are expected to actively participate in the presentation.
 - o Presentation should cover the following aspects of the program:
 - The development, usability and functionality of the program must be demonstrated and explained to the judges.
 - Solution must run standalone with no programming errors.



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- Data must be free of viruses/malware.
- Competitors must provide comprehensive documentation including a readme file, source code, templates/libraries used, and documentation of any copyrighted or open-source material used.
- The presentation should follow the rating sheet and include the following:
 - Code Quality: What are the specifics of and the big picture of the code?
 - User Experience: What focus is on the ease-of-use and accessibility of the interface?
 - Functionality: Speak to all aspects of the topic

Scoring

- The preliminary presentation score will determine the finalists.
- The final presentation score will determine the winners.
- Judges must break ties.
- The decision of the judges is considered final. All announced results are final upon the conclusion of the National Leadership Conference.

Americans with Disabilities Act (ADA)

• FBLA meets the criteria specified in the Americans with Disabilities Act for all competitors with accommodations submitted through the conference registration system by the registration deadline.

Recording of Presentations

- No unauthorized audio or video recording devices will be allowed in any competitive event.
- Competitors in the events should be aware FBLA reserves the right to record any presentation for use in study or training materials.

Penalty Points

- Competitors may be disqualified if they violate the Code of Conduct or the Honor Code.
- Five points are deducted if competitors do not follow the Dress Code or are late to their assigned presentation time.



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Coding & Programming Presentation Rating Sheet						
Expectation Item	Not Demonstrated	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned	
Code Quality						
Appropriate use of comments, naming conventions, and proper formatting	No comments provided	Comments provided but are not logical	Comments provided assist judges throughout the demonstration	Comments provided are logical, useful, and complete		
	0 points	1-6 points	7-8 points	9-10 points		
The program is modular in a way that makes logical, readable sense	Program does not make logical, readable sense	Program is either logical or readable, but not both	Program is logical and readable	Program exhibits an advanced knowledge of programming		
	0 points	1-6 points	7-8 points	9-10 points		
User Experience						
User interface is intuitive or clear instructions are provided	No instructions provided and is not intuitive	Instructions provided are not intuitive	Appropriate & clear instructions are provided	Program is intuitive and clear instructions are provided		
	0 points	1-6 points	7-8 points	9-10 points		
Users can easily navigate between pages	No help menu or navigation system incorporated	Includes basic help menu and usable navigation	Interface contains no spelling errors, has interactive help menu, and has no navigation errors	Program use also includes an intelligent feature such as an interactive Q&A		
	0 points	1-6 points	7-8 points	9-10 points		
User input is validated	User input isn't validated	User input validation attempted, but does not catch important edge cases or is not done correctly	User input is validated	Input validation applied on both syntactical and semantic levels		
	0 points	1-2 points	3-4 points	5 points		
Functionality						
Program addresses all parts of the prompt	Program does not address the topic/problem	Program addresses the topic/problem at a minimal level	Program fully addresses the topic/problem	Program fully addresses the topic/problem, and the correlation is explained in the instructions		
	0 points	1-6 points	7-8 points	9-10 points		
Program generates a presentable report	Output reports are not accurate or not available	Output reports are not sufficient to analyze data	Output reports are error free and provide all necessary information to analyze data	Output reports allow user to customize and analyze information		
	0 points	1-6 points	7-8 points	9-10 points		
Data storage	There is no storage of data	Variables are used inconsistently, or in a way that is unclear	Variable name and usage is clear. Variables store data that updates when necessary. Each variable performs only one job, and the correct data type is	More complex data storage such as arrays and lists are used where appropriate and variable scope makes sense		
			used	1		



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Expectation Item	Not Demonstrated	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
Presentation Delivery					
Statements are well- organized and clearly stated	Competitor(s) did not appear prepared	Competitor(s) were prepared, but flow was not logical	Presentation flowed in logical sequence	Presentation flowed in a logical sequence; statements were well organized	
	0 points	1-6 points	7-8 points	9-10 points	
Demonstrates self- confidence, poise, assertiveness, and good voice projection	Competitor(s) did not demonstrate self- confidence	Competitor(s) demonstrated self- confidence and poise	Competitor(s) demonstrated self- confidence, poise, and good voice projection	Competitor(s) demonstrated self- confidence, poise, good voice projection, and assertiveness	
	0 points	1-6 points	7-8 points	9-10 points	
Demonstrates the ability to effectively answer questions	Unable to answer questions	Does not completely answer questions	Completely answers questions	Interacted with the judges in the process of completely answering questions	
	0 points	1-6 points	7-8 points	9-10 points	
	Staff Only: Penalty Po	oints (5 points for dress	code penalty and/or 5 poi	nts for late arrival penalty)	
			Prese	ntation Total (100 points)	
Name(s):					
School:					
Judge Signature:					Date:

Comments: