

Computer Game & Simulation Programming

Computer Game & Simulation Programming provides members with the opportunity to design and implement a computer game or simulation based on a specific topic. Interactive computer games and simulations have achieved broad implementation in a wide variety of business and educational disciplines.

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, Communication, Critical Thinking,

Leadership, Professionalism, Teamwork, Technology

2024-25 Topic

Create a game that encourages critical thinking and decision-making.

Include:

- Scenarios with ethical challenges
- Multiple outcomes based on player decisions
- Scoring (examples include points system, leaderboards, etc.)

The game must:

- Be playable on the student device using Windows 10, Mac OS, a modern web browser, or a mobile platform
- Be secure
- Have no game-breaking bugs

Games should consider accessibility features to accommodate players with disabilities.



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</u> link.

District/Region/Section

Check your District's Call to Conference for any district-specific information about presentation events.

State

Presentation events will have a 1-minute set-up time. Most presentations will happen in a large ballroom, and all competitors will present in the preliminary round. See below for list of required competition items; Colorado FBLA requires the same items set by National FBLA at our State Leadership Conference. However, Colorado FBLA will not be providing power, a projector, or screen for final presentations.



Computer Game & Simulation Programming

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
Final Presentation	 Technology and presentation items Conference-provided nametag Photo identification Attire that meets the FBLA Dress Code 	 Table Internet access Power Projector with HDMI cord Projector screen

Important FBLA Documents

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

Policy and Procedures Manual

• Competitors should be familiar with the Competitive Events Policy & Procedures Manual, found on the Competitive Events page on www.fbla.org.

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.



Computer Game & Simulation Programming

- 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
 - Equipment Set-up Time: 3 minutes
 - o **Presentation Time:** 7 minutes (one-minute warning)
 - 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 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 Competitors/teams are randomly assigned to sections.
 - 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)



Computer Game & Simulation Programming

- 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:
 - Choosing a programming language or game/animation engine to create a standalone executable program that will display creativity, programming skill, and convey the message of the topic.
 - The development, usability and functionality of the program must be demonstrated and explained to the judges.
 - Data must be free of viruses/malware.
 - Must be graphical in nature, not text based.
 - Must have an initial title page with the game title, user interface control instructions, and active button for Play and Quit.
 - Must have a quit command programmed to the escape key.
 - 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:
 - Concept and Design of the Game: What are the game rules? Are they easy to understand? Do the rules address all aspects of the game?
 - Implementation of the Concept & Design: What process was used to turn the concept and design into software? How was the art/sound built?
 - User Experience: Does the user have a good experience with the interface?
- Final Presentation Information
 - o **Equipment Set-up Time:** 3 minutes
 - o **Presentation Time:** 7 minutes (one-minute warning)
 - 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.)
 - 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



Computer Game & Simulation Programming

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.
- 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)
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Computer Game & Simulation Programming

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.



Computer Game & Simulation Programming

Computer Game & Simulation Programming Presentation Rating Sheet							
Expectation Item	Not Demonstrated	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned		
Concept & Design							
Game addresses all parts of the concept/topic and guidelines	Concept / topic are not addressed, and one or two guidelines not followed	Concept / topic not fully developed, and 3 or more guidelines not followed	Fully addresses the concept/ topic and followed all guidelines	User with no knowledge of the concept/topic can identify it based on use of project and followed all guidelines			
	0 points	1-8 points	9-12 points	13-15 points			
Game rules are well- defined and clearly explained	Rules contain substantial errors affecting game play	Rules contain errors that have minimal impact on game play	Rules are error free as discovered through basic game play	At least one advanced rule feature available			
	0 points	1-2 points	3-4 points	5 points			
Game is challenging, but can be completed	Game is overly simplistic and/or cannot be completed	Game can be completed but is simplistic	Game is challenging and can be completed	User can navigate the game with rules as defined and several outcomes are available for completion			
	0 points	1-2 points	3-4 points	5 points			
Innovation and Creativity of the Game	No innovation or creativity is demonstrated	Very little innovation or creativity is demonstrated	Game is innovative or creative	Game is innovative and creative			
	0 points	1-2 points	3-4 points	5 points			
Implementation							
Describes programming languages, graphic design tools, game engines, or other software used and evaluates the technical complexity and sophistication of the	Program documentation not provided	Program documentation contains errors	Program documentation is error free	Program documentation invites use of advanced features			
implementation	0 points	1-2 points	3-4 points	5 points			
Graphics and game assets are appropriate for concept and/or topic	No graphic design principles applied	Graphics are distracting/busy	Graphics are appropriate for the concept/topic	Graphics enhance the user experience			
	0 points	1-2 points	3-4 points	5 points			
Graphics and game assets are consistently applied	Graphics & assets not available	Graphics & assets not consistent	Graphics & assets consistently applied	Graphics & assets consistently applied and enhance the user experience			
	0 points	1-2 points	3-4 points	5 points			
Graphics and game assets are appropriate for the concept and/or topic, and their quality and consistency enhance the overall user experience	No design principles applied	Color, contrast, background, typography, sound and design are distracting or busy	Color, contrast, background, typography, sound, and design are appropriate for the concept or topic	Color, contrast, background, typography, sound, and design enhance the user experience			
	0 points	1-2 points	3-4 points	5 points			
User Experience							
Title screen functions and provides clear instructions	No title screen provided	Title screen has limited instructions and/or functionality	Title screen functions and provides clear instructions	Title screen provided, but allows user to execute without instructions			
	0 points	1-2 points	3-4 points	5 points			



Computer Game & Simulation Programming

Expectation Item	Not Demonstrated	Below Expectations	Meets Expectations	Exceeds Expectations	Points Earned
Users can easily navigate between pages, and the overall user engagement and enjoyment are considered	Experience intended for the game is not defined	User can navigate the game but experience and purpose are not defined	User can navigate and complete the game following the rules	Game includes an operating multi-player function	
	0 points	1-6 points	7-8 points	9-10 points	
Game controls and mechanics are intuitive	Controls & mechanics aren't present	Controls & mechanics not fully present	Controls and mechanics are intuitive	Controls and mechanics are intuitive and enhance the user experience	
	0 points	1-2 points	3-4 points	5 points	
resentation 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	
				nts for late arrival penalty)	
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Name(s):			. 1000		
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Comments: