



2024

BRICS SKILLS COMPETITION

(BRICS FUTURE SKILLS & TECHNOLOGY CHALLENGE)

Business Software Solutions

BRICS-FS-38

Technical Description

(International Final)

July, 2024



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1 Project Profile

1.1 Project Description

Competition Name: Business Software Solutions

Competition Category: Electronic Information

1.2 Purpose of the Competition

As a national basic and strategic industry, software industry plays an important role in promoting the development of national economy and society, transforming the mode of economic growth, improving the efficiency of economic operation, and promoting the integration of informatization and industrialization, etc., and it is an industry that the state supports and encourages. Digital transformation, open innovation, and deep integration of technology and business are important features of the software industry in the new era.

The competition is closely aligned with the software industry standards, job talent demand standards, professional teaching standards, vocational skills level standards, and follows the tenet of "promoting teaching by competition, promoting learning by competition, and promoting reform by competition" to promote the reform of talent cultivation mode and deepen the reform of talent cultivation mode of software technology and other professions. Talent cultivation model reform, deepen the software technology and other professional "three teaching" reform. Focusing on the national strategy of "digital industrialization and industrial digitization", the competition is oriented to the industries of "software+manufacturing, software+commercial, software+transportation, software+logistics, software+agriculture, software+government affairs" and so on. " and other industrial

digital business software industry fields, to promote industry leading enterprises and vocational colleges and universities combined with the "industrial high-end and high-end industry" development needs, in talent training, social services, application of scientific research and innovation to deepen the integration of production and education and school-enterprise cooperation.

2 Competencies Required of Players

This competition is based on real projects developed by enterprises as a carrier, through "software prototyping - database design - functional development - project deployment and testing" and other typical tasks of software development, to examine the core skills of the participants, such as business process and requirements analysis, software product conceptualization and design, technical architecture design, coding and development, project deployment and testing, as well as project collaboration, communication, stress resistance and professional standards. Through typical software development tasks such as "software prototyping, database design, functional development and project deployment and testing", participants will be examined on their core skills such as business process and requirements analysis, software product conceptualization and design, technical architecture design, coding and development, project deployment and testing, as well as their professional qualities such as project collaboration, communication, stress resistance and professional standards. The assessment techniques include: Axure prototyping, MySQL database, Java, MyBatis, SpringBoot, Spring Security, Redis, network communication, Vue.js (vue-element-admin), RESTful API design, Nginx, and project deployment testing.

3 Competition Item

3.1 Competition Modules

Module I: System Requirements Analysis

This module focuses on the competitor's ability to perform system requirements analysis based on given requirements, including:

(1) system planning and design. According to the given project requirements, combining and planning of requirements, using the standard requirements specification (template), the description of the requirements specification, write the module outline brief, draw the corresponding business process diagram / activity diagram, use case diagram, class diagram, timing diagram, E-R diagram.

(2) Prototyping. According to the functional requirements of the module, use the prototype drawing software to carry out the prototype design of the module and realize the interaction function between the prototype pages.

Module II: Application Software Development

This module focuses on the competitor's business design, front-end page development and back-end business code writing skills, including:

(1) Front-end page development. Based on the given system requirements, use the data interface provided by the back-end API, use HTML5, CSS3, JavaScript, Vue.js (ElementUI, vue-element-admin) and other technologies to complete the front-end page and realize the business functions following the MVVM model. Coding is required to comply with front-end engineering development specifications.

(2) Back-end business development. Based on the given system requirements, use visual development tools to design the database, and use Spring Boot framework to

implement the back-end business functions, complete the RESTful API interface development, and release the operation. Requirements for the design of the Spring Boot framework in line with the Domain/POJO, DAO, Service, Controller layered architecture model, coding in line with the naming and commenting specifications.

Module III: System Deployment Testing

This module focuses on examining the participants' abilities in system deployment, functional testing, bug troubleshooting and repair, and document writing, specifically including:

(1) System Deployment. Publish the given project into the integrated deployment tool to ensure normal operation.

(2) Functional testing and bug fixing. Using the given front-end and back-end source code, formulate test strategies, design test cases, and complete the specified functional tests; record the bugs appeared in the tests, and analyze and repair the bugs; based on the test report template, write system test reports.

3.2 Competition Time

The total duration of this competition is 6 hours (conducted on 1 day), and each team independently completes the competition modules specified in the competition content within the time limit.

3.3 Module Duration & Marks

Table 1 List of Module Names, Duration and Marks

Module	Thrust	Competition Duration	Marks
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Module I	System Requirements Analysis	System planning and design and prototyping based on the given requirements description.	6 hours	25 points
Module II	Application Software Development	Design the system database and complete the development of front-end pages, back-end business and interactive functions based on the specified development framework.		55 points
Module III	System Deployment Testing	Perform system deployment, functional testing and bug fixing for a given project and complete system testing documentation.		20 points

4 Competition Methods

4.1 Competition Format

This competition is an offline format. All teams compete on-site based on the given project modules for 1 day, completing the competition modules within a total of 6 hours.

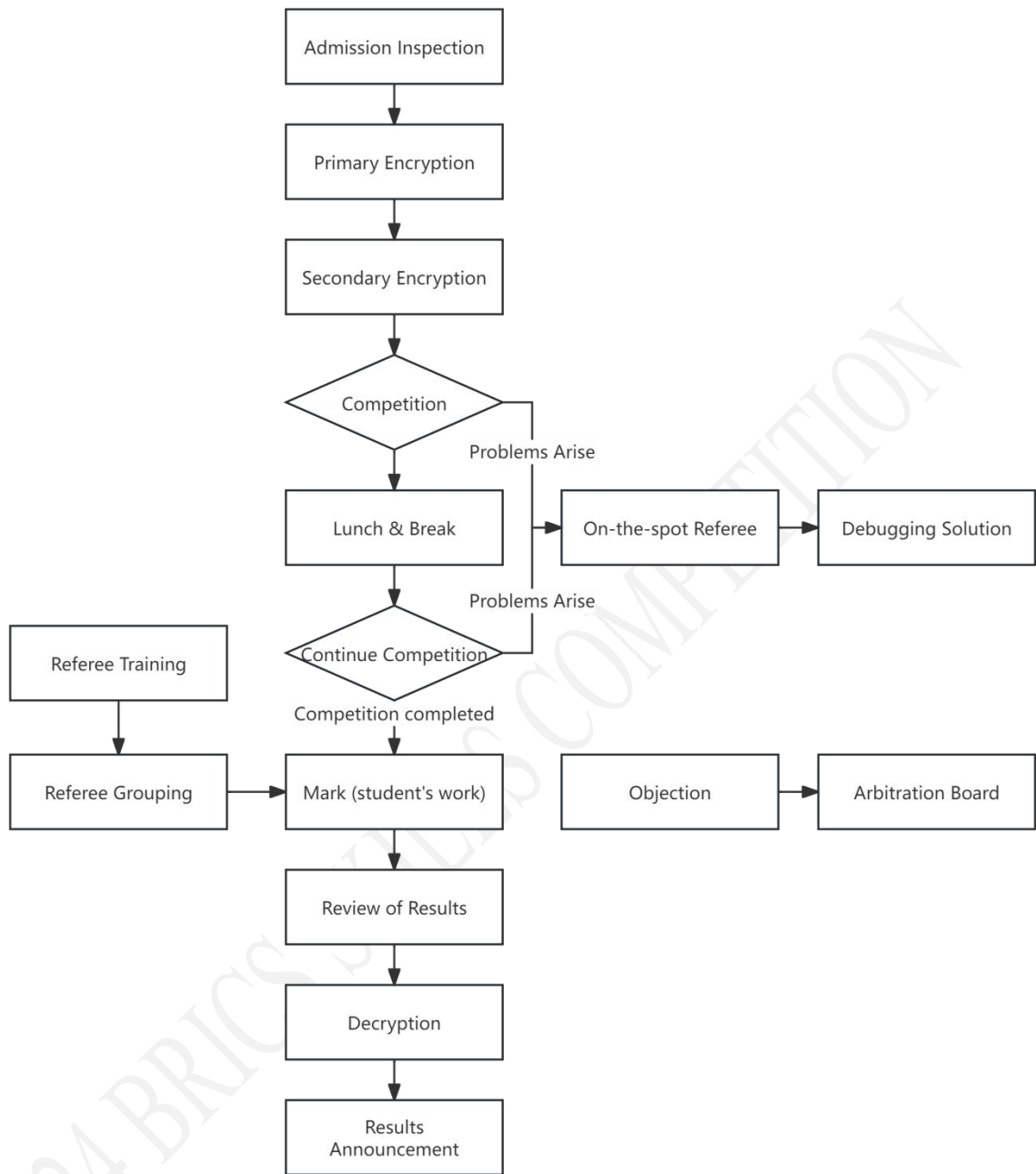
4.2 Composition of Players

This is an individual skill competition, each team consists of 1 player and each team is limited to 1 instructor.

5 Competition Process

5.1 Competition Flow Chart

The flow of this competition is shown below.



5.2 Competition Schedule

The following list of competition schedules is for reference and is subject to actual scheduling.

Table 2 List of competition times

Date	Time	Entry
Check-in Day	Before 15:00	Teams Check in
	15:00—15:30	Opening Ceremony
	15:30—16:30	Leader's Meeting, Referee's Meeting
	16:30—17:00	Teams familiarize themselves with the competition venue
	17:00—18:00	The head referee checks the field before the match and closes it
Competition Day	07:20—07:30	Check in at the race track
	07:30—07:55	Primary Encrypted: The team draws its entry number
	07:55—08:20	Secondary encryption: Teams draw their race numbers
	08:20—08:30	Teams enter the race course and conduct pre-competition equipment and material inspections
	08:30—11:30	Competition between players
	11:30—12:30	Lunch and breaks at the track
	12:30—15:30	Players continue to compete
	15:30—17:30	Admissibility of complaints
	15:30—End of marking	Approval and declassification of results
	After reviewing the results for correctness	Closing Ceremony, Announcement of Results

6 Competition Rules

6.1 Entry Requirements for Participants

There are no entry groups. Vocational colleges and universities (including senior undergraduate and technical colleges and universities) and undergraduate colleges and universities, teachers and students, and employees of enterprises and public institutions who are between 16 years old (born before January 1, 2008) and 35 years old (born after January 1, 1989) are eligible to apply for the competition as contestants.

6.2 Team Formation

1. Each team consists of competitors, guidance experts, interpreters, and team support staff (leaders), of which the competitors and guidance experts are required to register for the competition. For the same team, the coaching expert and the competitors cannot be the same person.

2. Each team in this competition is limited to one instructor.

3. Participants and guidance experts shall not be replaced at will after their registration has been confirmed. If a participant or guidance expert is unable to participate in the competition for any reason during the preparation process, he/she shall issue a written explanation to the organizing committee 10 working days prior to the competition, and shall be replaced after verification by the office of the organizing committee of the competition. If a contestant is unable to participate in the competition due to special reasons, he/she will be regarded as giving up the competition automatically.

7 Technical Specification

The technical specifications, professional knowledge and technical skills of this competition include: the educational and teaching requirements of software technology-related professions, industry and vocational technical standards, as well as the timely revision of the technical specifications followed by this competition according to the revised teaching standards and specifications for talent cultivation of software technology-related professions in accordance with the revised catalog of higher vocational education.

7.1 Teaching Standards

Table 3 List of Teaching Standards

Number	Unit	Name
1	Ministry of Education	Higher vocational education specialty profiles: 51 electronics and information category - 5102 computer category - 510201 computer application technology
2	Ministry of Education	Higher vocational education specialty profile: 51 electronics and information category - 5102 computer category - 510203 software technology

7.2 Industry Standards

Table 4 List of industry standards

Number	Serial Number	Name
1	DB21/T 2347.3-2014	Vocational Skills for the Information Technology Industry Part 3: Software Development
2	GB/T 38557.1—2020	Systems and Software Engineering Interfaces and Data Exchange Part 1: Specification of Interfaces between Enterprise Resource Planning Systems and Manufacturing Execution Systems
3	SJ/T 10367-1993	Computerized process control software development protocol
4	GB/T 36475-2018	Software Product Classification
5	GB/T 36964-2018	Software Engineering Software Development Cost Metrics Specifications
6	GB/T 37691-2019	Programmable Logic Devices Software Security Design Guide
7	GB/T 25000.2-2018	Systems and Software Engineering Systems and Software Quality Requirements and Evaluation (SQuaRE) Part 2: Planning and Management
8	GB/T 28174.1-2011	Unified Modeling Language (UML) Part 1: Infrastructure
9	GB/T 11457-2006	Information technology Software engineering terminology
10	GB/T 32421-2015	Software Engineering Software Review and Audit
11	GB/T 38634.1-2020	Systems and Software Engineering Software Testing Part 1: Concepts and Definitions
12	GB/T 32423-2015	Systems and Software Engineering Verification and Validation
13	GB/T 32424—2015	Systems and Software Engineering Designer and Developer Requirements for User Documentation

Number	Serial Number	Name
14	GB/T 30999—2014	Systems and Software Engineering Survival Cycle Management Process Description Guide
15	GB/T 30971—2014	Software engineering Recommended practices for use on the Internet Web site engineering, web site management, and web site life cycle
16	GB/T 26239—2010	Software Engineering Development Methodology Metamodeling
17	GB/T 22032—2021	Systems and Software Engineering Systems Life Cycle Processes
18	T/CESA 1154—2021	Information Technology Services Practitioner Competency Assessment Guide Design and Development Services
19	T/CESA 1155—2021	Information Technology Services Practitioner Competency Assessment Guide Integration and Implementation Services
20	T/CESA 1156—2021	Information Technology Services Practitioner Competency Evaluation Guide Operation and Maintenance Services

7.3 Expertise & Technical Skills

Table 5 List of expertise and technical skills

Number	Category	Specification
1	Demand Analysis	Knowledge of the methods and techniques of requirements analysis and the ability to write requirements specifications, conduct requirements analysis and design based on user needs.
2	Software Design	Understand the principles and methods of software design, and be able to design software according to the requirement specification, including architecture design, module design, and interface design.
3	Coding Realization	Knowledge of coding implementation techniques and specifications, and the ability to code implementation based on software design, including code writing, debugging, and testing.
4	Software Testing	Understand software testing methods and techniques and be able to perform software testing, including unit testing, integration testing, system testing, etc. to ensure software quality.
5	Software Maintenance	Understand the methods and techniques of software maintenance and be able to maintain and upgrade the software, including bug fixes and feature extensions.
6	Project Management	Understand project management methodologies and tools and be able to perform project planning, schedule control, risk management, etc. to ensure that projects are completed on time and with quality.

7	Learning Ability	Ability to learn new knowledge and technology quickly, and be able to continuously learn and master new techniques and tools to enhance your professionalism and competitiveness.
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8 Technical Environment

8.1 Competition Environment

The competition venue includes contestant competition area, display platform area, referee area, technical support area, check-in area and service area.

1. Competition area for participants. Each competition workstation needs to be marked with a conspicuous workstation number, the workstation spacing is greater than 1.5m, each workstation area is greater than 8 square meters, each workstation to ensure independent power unit (installation of leakage protection switch), to ensure that the teams do not interfere with each other. The venue requires that the entire competition process has no dead-end video surveillance, and the surveillance video is kept for 3 months. Environmental standards require to ensure that the venue lighting (more than 500lux), lighting and good ventilation, the provision of stable water, electricity, and emergency backup power supply, the provision of sufficient dry powder fire extinguishing equipment.

2. Display platform area. A segregation zone separate from the competition venue is required for team leaders, instructors and staff to rest and conduct other related activities.

3. Referee's area. For referees to rest and work. It is equipped with 1 server, 10 computers, 20 sets of tables and chairs, 1 A4 laser printer, water dispenser, paper cups and stationery.

4. Technical support area. Workspace for technical support staff.

5. Check-in area. Check-in area for competitors.

6. Service areas. Equipped with common medicines, disinfectant supplies and other

first-aid supplies, providing medical and other services, and separated by isolation belts.

8.2 Hardware Environment & Configuration

Table 6 List of competition hardware environment and configuration

Number	Name	Configuration Requirement	Quantities
1	Computers	<ul style="list-style-type: none"> ● Operating System: Windows 10 Professional (64-bit) ● Processors: i5 and above ● Memory: 16GB and above ● Hard Disk: 256GB SSD and above ● Monitor: 23" 1920 x 1080 resolution and above ● Wired network card: 1000Mbps Ethernet card 	2 units/per team (including 1 development machine and 1 player server)
2	Routers	<ul style="list-style-type: none"> ● Gigabit port ● Wan number of ports: 1 ● Number of LAN ports: 3 or more 	1 unit/per team
3	Competition Server	<ul style="list-style-type: none"> ● Dual-channel Xeon processor 32 cores 64 threads and above, 128G and above memory, 512G and above SSD, monitor resolution 1920*1080 and above, Gigabit network interface, USB interface ● Windows Server 2021 operating system ● Deployment of local resource services ● Support for virtualization services 	1 unit
4	Switches	<ul style="list-style-type: none"> ● Ports: 48 (Gigabit) ● Layer: Layer 3 enterprise-class network switch ● Features: support VLAN, WEB network management, port isolation, ACL IP extension and other features 	Depending on the number of players

8.3 Software Environment & Version

Table 7 List of competition software development environments and versions

Category	Name	Version	Quantities
Operating System	Windows10	Windows 10 Professional (64-bit)	1
Development Tool	Adobe Photoshop	Version 2019	1
	Axure RP	Version 9.0	1
	IntelliJ IDEA	Version 2023.1 and above	1
	Visual Studio Code	Version 1.77 and above	1

Category	Name	Version	Quantities
	HBuilder X	Version 3.1.22	1
	Vue	Version 3 and above	1
	JDK	Version 8 and above	1
Database & Management Tools	MySQL	Version 8.0	1
	Redis	Version 3.0 and above	1
	Navicat Premium	Version 11.0 and above	1
Browser	Firefox	Version 112 and above	1
	Chrome	Version 113 and above	1
Other Auxiliary Software	WPS	Version 11.1.0	1
	Postman	Version 10.5	1
	Office Visio	Version 2021	1
	WinRAR	Version 6.0.2	1
	phpstudy	Version 8.0	1

9 Competition Safety

9.1 Organizational Structure

1. Set up a safety and security team for the competition headed by the director of the competition executive committee, with members including relevant personnel from the host institution and partner enterprises.

2. Establishing a coordination mechanism with relevant local departments, formulating contingency plans, and dealing with emergencies in a timely manner to ensure the safe conduct of the competition.

9.2 Competition Environmental Safety Management

1. Ensure that all access points are clear and guarded by specialized personnel, control

the flow of personnel and the saturation of spectators at the venue, and post safety instruction signs.

2. A cordon will be set up around the venue and no unrelated persons will be allowed to enter. All participants must enter the venue on the basis of a valid ID issued by the Executive Committee of the event.

3. Equipped with necessary medical personnel and medical drugs, with emergency rescue plan.

4. Set up emergency evacuation diagrams for emergencies. In case of special circumstances, obey the unified command of the competition.

9.3 Guaranteed Living Conditions

1. In principle, the Executive Committee shall make uniform arrangements for the food and accommodation of the participating teams. The host institution shall respect the religious beliefs and cultural practices of the minority participants and make arrangements for the food and accommodation of the minority participants and teachers.

2. Accommodations arranged during the competition should have business license qualifications. If a school dormitory is used as accommodation, the Executive Committee and the school providing the dormitory shall be jointly responsible for the safety of accommodation and food during the competition.

9.4 Grouping Responsibilities

1. When organizing a team, each school shall arrange to purchase personal accident insurance for the participants during the competition.

2. After the formation of each school team, it is required to formulate a relevant

management system and conduct safety education for all players and instructors to realize the docking with the safety management of the competition field.

9.5 Emergency Management

When an accident occurs during the race, the person who discovered it should report it at the first time and take measures at the same time to avoid the situation from expanding. The Race Executive Committee shall immediately activate the plan to solve the problem. In case of major safety problems, the race may be suspended and the decision on whether to suspend the race shall be made by the Race Executive Committee.

10 Evaluation of Results

10.1 Scoring Principles

1. Principles of Outcome Scoring

The scoring referee scores the contest deliverables submitted by the contestants based on the contest evaluation criteria.

2. Principle of Independent Scoring

According to the division of labor among referees, different referees responsible for scoring the same module adopt random draws for independent scoring to ensure rigorous, objective and accurate performance evaluation.

(1) The referee conducts a random draw for grouping, eliminating the subjective will to form teams, each scoring completely independently, and the referees do not interfere with each other.

(2) Referees are uniformly assigned to a studio for scoring, and match supervisors may

supervise at random.

3. Principle of Non-Transmission of Errors

Scores are calculated separately for each session and errors are not passed on and are counted towards the total score at the required rate.

4. Principles of Spot-Check Review

(1) In order to safeguard the accuracy of performance evaluation, the Supervisory Team will review the results of all teams (players) that rank in the top 30% of the total results of the competition; and review the remaining results on a sampling basis, with a sampling coverage rate of not less than 15%.

(2) The supervisory team is required to inform the head referee in writing in a timely manner of any errors found in the review, and the head referee will correct the scores and sign to confirm. If the error rate of review and sampling is more than 5%, it will be recognized as a non-small probability event, and the referee team is required to review all the scores.\

10.2 Marking Standard

The competition scoring using referee division of labor, according to the sub-module set up a number of scoring groups, 2 referees for a group, each give the sub-module score, 2 referees to take the average as the sub-module scores; if the 2 referees scoring deviation is greater than 30%, it is necessary to re-score the referee under the supervision of the chief referee.

Table 8 List of scoring samples

Scoring items	Scoring Rules	Correct Score	Scoring Value
System Requirements Analysis	List items include product name, energy consumption value, and function operation (modification, deletion) [0.5 point for each missing item].	1.5	1.0

Application Software Development	List item includes title, details, and thumbnail [0.5 points each].	1.5	1.0
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10.3 Scoring Methods

1. The competition is worth 100 points.
2. The scoring score of the contest = Module 1 score + Module 2 score + Module 3 score.
3. The organization involved in the management of the results of this competition includes the referee group and the supervision and arbitration group.
4. The competition takes a step-by-step scoring and cumulative total scoring method for the results submitted by the participating teams. Scores are calculated separately for each sub-module, and errors are not passed on and are counted into the team's total score according to the specified ratio.
5. If the supervisory team finds errors in the review, they need to inform the head referee in writing in time, and the head referee will correct the scores and sign to confirm. If the review and sampling error rate exceeds 5%, the referee team needs to review all the scores.
6. In the process of the competition, if the contestants do not obey the referee's decision, disturb the order of the field, fraud and other behaviors, the referee in accordance with the provisions of the corresponding points will be deducted, and in serious cases, will be disqualified from the competition, and the results of the competition scores counted as 0 points.
7. The results of the competition will be declassified and audited for accuracy, and then announced to all the participating teams after the signature of the referee, and the results of the competition will be subject to the final results of the announcement.

11 Incentive Schemes

11.1 Award Certificate

Participating teams receive an award certificate issued by the Russian organizers.

11.2 Gold, Silver, Bronze & Merit Awards

The teams from BRICS countries will be ranked uniformly, and the domestic and foreign teams that have won the top 6 places will be awarded gold, silver and bronze medals and certificates accordingly; the teams that have not won the gold, silver and bronze medals but have outstanding achievements will be awarded with the winning medals and certificates (the maximum number of teams is 3 teams).

The details of medal evaluation are as follows:

1. The first-ranked national team of each participating country is eligible to enter the gold medal ranking; the first-ranked team will get the gold medal, and individual teams with outstanding performance can be tied for the gold medal in this competition;

2. In addition to the gold medalist teams, one of the best-performing national teams from each participating country is eligible to enter the silver medal rankings, with the top two best-performing teams winning the silver medals;

3. In addition to the gold and silver medalist teams, one of the best-performing national teams from each participating country shall be eligible for the bronze medal ranking, with the top three best-performing teams winning bronze medals;

4. Winning medals will be awarded to teams that do not win gold, silver or bronze medals but have outstanding results (maximum of 3 teams);

5. Online international teams will not be awarded with physical medals, but only the

corresponding medals and certificates.

11.3 First, Second & Third prizes

Chinese teams participating in the International Final of the China Division of this competition will be awarded 10% of the first prize, 20% of the second prize and 30% of the third prize according to the principle of rounding up and down, and will be awarded with corresponding certificates.

11.4 Other Awards

Certificates of adjudication will be issued to the members of the expert group and adjudicators involved in adjudication of each project; certificates of excellent adjudicators will be issued to the guidance experts of the teams that won the first and second prizes; Outstanding Contribution Award will be issued to the units that have made outstanding contributions to the organization of the competition; Excellent Organization Award will be issued to the provincial or regional selection units that have actively organized the competitions, carried out pre-competition selection training, and have not committed any irregularities or violations of discipline during the competitions. The "Outstanding Organization Award" will be given to the provincial or regional organizers of the selection contest who actively organize the pre-competition selection and training without any violation of discipline during the competition.

12 Competition Planning

1. The competition hardware and software environment and computers are stress-tested before the competition to verify proper functioning.

2. The venue provides 10% of the total participating teams with spare workstations and 10% of the total participating teams with spare servers.

3. In the event of equipment power failure or malfunction during the competition, the on-site referee shall confirm the situation in time and arrange for technical support personnel to deal with the situation. The on-site referee shall register the details, fill in the registration form of making up time, and report to the referee for approval, and then arrange for the extension of the corresponding contestant's competition time.

4. During the competition of this event, each workstation is independently powered and each team uses an independent network for the competition, so if an accident occurs at a workstation during the competition, it will not affect the normal competition at other workstations, and will not have an impact on the results.

5. In case of large-scale accidents and safety problems (e.g. morbidity, poisoning, etc.) during the competition, the person who found them should report them to the Executive Committee of the competition in the first time, and the Executive Committee of the competition should take measures such as suspending the competition and evacuating the crowds to avoid the expansion of the situation. If there is a major safety problem in the event, the race can be suspended, and the decision of whether to suspend the race shall be made by the Executive Committee of the event.

6. If an accident is formed or caused by a participating team, the team will be warned or disqualified from winning the award depending on the circumstances; if the staff of the event violates the rules, they will be held responsible in accordance with the corresponding system.

13 Competition Instructions

13.1 Information for Teams

1. During the tournament, members of the participating teams shall not contact the referees privately. Anyone who is found to have made false statements shall be disqualified from participating in the tournament and the results shall be invalidated.

2. All participants shall complete the evaluation of the competition in accordance with the requirements of the competition regulations.

3. If the participating teams believe that there are equipment, tools and software that do not comply with the regulations of the competition, unfair judging, rewards, and irregularities of the staff, they shall submit a written complaint to the Arbitration Team of the competition within 2 hours after the end of the competition of the event. Each team shall obey and implement the final arbitration result of the grievance.

4. When organizing a team, each school shall arrange to purchase personal accident insurance for the participants during the competition.

13.2 Information for Instructors

1. All participating teams should promote good morals, follow the instructions, obey the referee, and refrain from cheating. If any falsification is found, the team will be disqualified and the ranking will be invalid.

2. The leaders of each team should firmly implement the regulations of the competition, strengthen the management of participants, make good preparations before the competition, and urge the players to bring good documents and other competition-related materials.

3. In the course of the competition, the team leader, instructors and other personnel are

not allowed to enter the competition site except for the contestants, executive referees, site staff and approved personnel.

4. If the participating teams have any objections to the competition process, the team leader shall submit a written report to the Arbitration Working Group of the competition within the specified time.

5. The team leader shall take the lead in obeying and implementing the arbitration result of the appeal and do a good job for the contestants. Competitors shall not stop the competition due to the appeal or dissatisfaction with the handling opinion, otherwise it will be treated as a forfeit.

6. Instructors should check the notice and content of the special webpage of the competition in time, study and master the regulations, technical specifications and requirements of the competition, and instruct the contestants to make all the technical preparations and competition preparations before the competition.

13.3 Information for Participants

1. Participants should strictly abide by the rules and regulations, operating procedures and process guidelines, ensure personal and equipment safety, accept the supervision and warning of the referee, and compete in a civilized manner.

2. Participants should arrive at the competition site according to the specified time, with their ID cards, student ID cards, and uniformly issued cards, to complete the entrance inspection, draw lots to determine the competition station number, and shall not be late or leave early.

3. Before entering the competition venue, participants shall hand over their ID cards, student ID cards and competition cards to the inspection personnel for safekeeping, and shall

not bring them into the venue.

4. Participants shall enter the competition venue with their workstation number and are not allowed to bring any electronic equipment and other materials and supplies.

5. Participants shall enter the competition venue in the specified time period, check the competition workstation number carefully and take their seats in the designated positions.

6. After entering the venue, the contestants should quickly confirm the status of the competition equipment, fill in the relevant confirmation documents, and have their signatures confirmed by the captain of the competition (competition workstation number).

7. Contestants are not allowed to start the operation before receiving the start signal. During the competition, if the operation cannot be continued due to the failure of computer software or hardware, the referee will confirm and activate the backup computer.

8. The contestants should complete the task book within the time specified in the contest, and keep the work records in time according to the requirements to prevent data loss caused by abnormal operating system and other equipment abnormalities. The contestants shall be responsible for any loss of data due to various reasons.

9. The answer sheets submitted by the participating teams shall be labeled according to the requirements, and no information such as place name, school name, name, and participation card number shall appear, or the results of the competition shall be canceled.

10. In the course of the competition, if the competition cannot be carried out due to serious operational errors or safety accidents (e.g. short circuit due to operational reasons leading to power failure at the venue, or equipment not working properly), the on-site referee has the right to suspend the team's competition.

11. Players will work continuously in each competition, and food and drinking water will be provided by the venue. During each match, the time for resting, eating, drinking or

toileting is counted as part of the match time.

12. In case of equipment failure caused by non-human factors during the competition, after confirmation by the referee, the competitor may apply to the head referee to make up the time for troubleshooting.

13. Participants are not allowed to end the competition early for any reason. If he/she needs to leave the competition field due to uncontrollable factors, he/she must raise his/her hand to the referee and leave only after the referee's permission and completion of the record.

14. Each competition team shall submit the results of the competition in accordance with the requirements of the competition and the requirements of the competition questions, and it is prohibited to make any marks on the results of the competition that are not related to the competition. At the end of the competition operation, the competition team shall confirm the successful submission of the documents required by the competition, and the referee shall mark the required position of the competition results and sign the confirmation together with the competition team.

15. At the end of the competition time, the contestants should all stand up and finish the operation. They may leave the competition field after being checked by the staff, and may not take away any information and equipment when leaving the competition field.

16. During the competition period, without the approval of the Executive Committee, the contestants shall not accept interviews related to the content of the competition conducted by other organizations and individuals. Participants are not allowed to publicize the information related to the competition privately.

13.4 Information for staff

1. The staff of the competition site will be employed by the Executive Committee of the

competition and will be divided into different jobs, and they will be required to wear the hangtags provided by the Organizing Committee when they enter the competition site.

2. The staff should obey the management of the Organizing Committee, strictly implement the rules and regulations formulated by the Organizing Committee, carry out the working arrangements of the Organizing Committee, actively maintain the order of the competition site, and stand fast at their posts in order to provide orderly services for the competition site.

3. The staff of the competition venue shall not carry any communication tools or articles not related to the competition when they enter the venue.

4. When the team enters the venue, the on-site referee and the venue staff shall review the items brought into the venue by the contestants according to the regulations. If any items are found that are not allowed to be brought into the venue, they shall be handed over to the accompanying staff of the team for safekeeping, and the venue shall not provide safekeeping services.

5. The field staff shall not answer any technical questions raised by the competitors during the competition, and shall report to the head referee in time in case of disputes.

14 Complaints & Arbitration

1. Teams may appeal to the Arbitration Panel for any non-compliance with the rules and regulations of the competition, such as instruments, equipment, tooling, materials, objects, computer hardware and software, tools and supplies used in the competition, competition refereeing, competition management, competition results, as well as irregularities in staff behavior, etc. The main body of the appeal shall be the team leader.

2. The subject of the complaint is the team leader of the competition team.

3. When the complaint is initiated, the team shall submit a written report to the Arbitration Panel in the form of a written report signed by the participants of the team. The report shall contain a full and factual description of the incident, the time of its occurrence, the persons involved, and the basis of the complaint. Non-written appeals will not be accepted.

4. Grievances shall be filed within no more than 2 hours after the end of the competition. It will not be accepted after the time limit.

5. The Arbitration Working Group of the competition organizes a review within 2 hours after the receipt of the grievance report and informs the complainant of the review result in writing in a timely manner. If the complainant still has any objection to the result of reconsideration, the provincial (city) team leader may submit an appeal to the Arbitration Committee of the competition area. The result of the Arbitration Committee shall be final.

6. The complainant shall not refuse to receive the result of the arbitration for any reason; he/she shall not disrupt the order of the competition for any reason; the result of the arbitration shall be signed by the complainant and cannot be received on his/her behalf; if the complainant leaves at the agreed time and place, he/she is regarded as giving up his/her own complaint.

7. The grievant may waive the grievance at any time.

15 Competition Observations

The competition will be designed as a viewing area with a large screen for real-time broadcasting of live action. The competition environment is designed according to the needs of the competition and the characteristics of the occupation, and part of the field will be opened safely on the premise that the competition will not be interfered. On-site observation

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should observe the following discipline:

1. Observers need to be approved by the Executive Committee of the competition, wearing observation documents led by the staff along the designated route, in the designated area to the site to observe the competition;
2. Observe the race in a civilized manner, do not make loud noises, obey the command of the staff of the racecourse, and put an end to all kinds of uncivilized behaviors that violate the order of the racecourse;
3. Observers are not allowed to communicate with the contestants and referees, pass on information, record data and information on the contest site, or affect the normal progress of the contest;
4. The staff has the right to remind and stop all kinds of uncivilized behaviors that violate the order of the competition field.



2024 BRICS SKILLS COMPETITION

