ITEM NOS.	CYBERSECURITY MALAYSIA's SCOPE OF WORKS, TECHNICAL SPECIFICATIONS & REQUIREMENTS	CYBERSECURITY MALAYSIA's RQMT LEVEL (*See Note 1*)	PLEASE TICK IF BIDDER COMPLY (*See Note 2*)	BIDDER'S REMARKS IF ANY (INCLUDING DETAILS AND ATTACHMENT) IN SUPPORTING THEIR COMPLIANCE STATEMENT	BIDDER'S REMARKS (INCLUDING DETAILS/REASONS AND ATTACHMENT) IF BIDDER DOES NOT COMPLY
A	**GENERAL REQUIREMENTS**				
1.0	**SCOPE OF WORKS**				
1.1	The development/enhancement of the platform **MUST** include the specified module, testing, commissioning, handover and acceptance for the enhancement works of e-Learning Module Platform as specified in the Scope of Works (SOW) and Bill of Quantity (BQ).	M			
1.2	Bidder shall develop/enhance e-Learning Module with three (3) new topics in the existing Platform for CyberSecurity Malaysia (CSM) including but not limited to: i) Stage 1 – Development/enhancement of e-Learning Module ii) Stage 2 – Pilot Project iii) Stage 3 – User Acceptance Test (UAT), Vulnerabilty Acceptance Test (VAPT), Final Acceptance Test (FAT), Deployment, and Commissioning.	M			
1.3	The platform shall be tested by CSM or third party appointed by CSM upon completion of User Acceptance Test (UAT). UAT will be done between CSM and bidder.	M			
1.4	Bidder shall confirm that their proposal is based on the entire provision of the above scope of works. Bidder's partial compliance to the said scope of works shall be disqualified.	M			
2.0	**BIDDER'S RESPONSIBILITY**				
2.1	The bidder shall review this document and take full responsibility of obtaining information from CyberSecurity Malaysia as may be required to meet the specifications and requirements.	I			

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2.2	The bidder shall review and fulfil all specifications and requirements before committing to sign the purchase agreement/LOA.	M			
2.3	The bidder **MUST** provide complete proposal of the platform development/ enhancement.	M			
2.4	Bidder is expected to sign the **Non-Disclosure Agreement (NDA)** with CyberSecurity Malaysia to ensure unnecessary disclosure of information on the subject area before, during and after delivery of the services.	M			
2.5	Bidder shall **ensure the code** that programmer writes implement secure coding practices, clear, accurate and be understandable and modifiable by future appointed programmers.	M			
2.6	Bidder **MUST** have dedicated and project team that relevant to this provision (e.g.: Project Management Office), bidder shall appoint a **project manager** with strong security background and with at least minimum of 2 years of platform development experience. Bidder shall provide curriculum vitae of project team members to be involved in the development of portal.	M			
3.0	**BIDDER PAST EXPERIENCES**				
3.1	Bidder shall have at least two (2) years' experience in development/enhancement platform.	M			
3.2	Bidder to provide list of client reference (e.g.; authorized contact person and contact number), list of relevant project experience or similar exercise by giving detail description of the job delivered for each client.	M			

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3.3	Bidder that well verse with e-learning platform or Learning Management System (LMS) is an added value.	I			
3.4	Bidder **MUST** have dedicated and certified project team. Also, in demonstrating their capability to provide consultation services for this project. Bidder shall provide curriculum vitae of project team members to be involved in the proposal. Consultation services shall include the following: - i) To guide end user with step-by-step guideline on how to fix an error ii) To guide end user on the technical requirements of the platform iii) To conduct training for user iv) To convert the content based on the story board given by CSM	M			
4.0	**DOCUMENTATION REQUIREMENTS**				
4.1	Proposals shall be in English. Documentations such as reports, minutes of meeting and storyboard modules shall be in Bahasa Melayu. Bidder shall be responsible for any translation cost incurred (if any) regarding the submission of the proposal and any documentation required by this tender.	M			
4.2	The bidder shall provide the documentation below for the project implementation: i) User Requirement Document. ii) Project Progress Meeting Documentation, including Minutes of Meeting and Slides presentation. iii) User Acceptance Test (UAT) approved by both parties. iv) Platform design document. v) List of software and license that purchase for this project. vi) User manual.	M			

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4.3	Bidder **MUST** provide **technical documentation and user manuals** upon completion of the project including but not limited to: i) Platform design specification ii) Development iii) User manual iv) Set up and configuration v) Installation vi) Data migration vii) Verification viii) Backup and restore procedure	M			
4.4	CyberSecurity Malaysia reserves the right to reproduce all, or part of the document submitted by the bidder for internal use.	G			
5.0	**DELIVERY REQUIREMENTS**				
5.1	Successful bidder shall complete the entire scope of works in six (6) months or earlier after receipt of CyberSecurity Malaysia Letter of Acceptance (LOA).	M			

5.2	The bidder shall describe the project management methodology to be undertaken in the project to ensure the time is met as scheduled as well as meeting the technical requirements of the project. The project management methodology shall include the tasks and activities involved as listed below:
	 i) Project team structure
	 ii) Point of contact
	 iii) Implementation schedule based on proposed project delivery and timeline which indicating:
	    - Key milestones, dates and deliverables
	    - Number of manpower involved and resumes
		M			

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5.3	CyberSecurity Malaysia has the right to reject any kind of bugs or platform error during or after deployment/installation within the warranty period. Correction or bug fixing shall be done within 30 days without extra charge.	M			
5.4	Bidder shall ensure to conduct, assist, deliver any services related to enhancing the security aspects of the platform including secure coding and VAPT will be done by the 3rd party appointed by CyberSecurity Malaysia after UAT. Bidder shall standby during the VAPT process and no cost of VAPT to be charged by the bidder to CSM.	M			
5.5	Upon completion of the development/enhancement works, bidder is required to submit: i) User Acceptance Test (UAT) report. ii) Final Acceptance Test (FAT) report iii) Source code. iv) Final report. *Note:* *i) All documents, licenses/subscription,reports or materials prepared or developed by the Vendor specifically in relation to or for the purpose of this Proposal, shall unless otherwise expressly agreed, belong and registered to CyberSecurity Malaysia (CSM)* *ii) Once the party agreed to the terms of the platform or dashboard, a separate term will be negotiated between the parties for the development, then the source code and related documents shall be transferred to CSM before CSM make a final payment.*	M			
B	**TECHNICAL SPECIFICATIONS & REQUIREMENT**				

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1.0	**PURPOSE** To develop/enhance the e-Learning Module with three (3) new topics in the existing Platform for CyberSecurity Malaysia	I			
1.1	**TECHNICAL SPECIFICATION** Bidder's proposal of the development **MUST** be able to follow the following specification and features or equivalent or higher: -	M			
1.2	The development/enhancement **MUST** be based on following criteria: i) Platform is consisting of 3 topics. Whereby each topic will have 4 modules, according to the storyboard provided by CSM. ii) The platform **MUST** be developed in **Bahasa Melayu.** iii) The platform will be concurrently accessed by 1000 students at one time. iv) To install, configure, and deploy the platform at any web hosting which has at least meet 99.4% platform and network uptime and security features. v) To purchase and configure 2 years SSL certificate from any trusted Certificate Authority (CA). vi) To follow and meet end user security features and server requirement.	M			

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2.0	**PROJECT PHASES**				
2.1	**STAGE 1: DEVELOPMENT/ENHANCEMENT OF E-LEARNING MODULE** i) KICK OFF MEETING CyberSecurity Malaysia (CSM) and successful bidder will discuss and finalize the activities, methodology of the project and outcome of the project. ii) DEVELOPMENT/ENHANCEMENT OF E-LEARNING PLATFORM WITH THREE (3) NEW TOPICS USING THE APPROVED CONTENT/STORYBOARD (Please see **Appendix 1** of the SOW) a) Bidder will need to have enough team members to develop and transform the content into an e-learning platform. b) Bidder will need to have enough experience to develop e-learning platform or LMS for 7 to 17 years old students. c) Bidder to fulfil the technical requirement for the develop e-learning platform LMS. d) Bidder to comply all items required as specified in Appendix 1 in the SOW.	M			

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	iii) BENGKEL PEMURNIAN a) CSM will arrange the workshop with Bahagian Sumber dan Teknologi Pendidikan (BSTP). b) Bidder will need to present the mock enhancement of e-learning platform and contents. c) Bidder to do the amendments accordingly. Deliverables: 1. The gamification module. 2. Assessment form for the developed e-learning module. 3. The e-Learning module is available for pilot project.	M			
2.2	**STAGE 2: PILOT PROJECT** i) PILOT PROJECT a) Bidder will need to prepare and be ready to assist in terms of technical error. b) Standby remotely during the pilot project or on-site at your own cost. c) Bidder will prepare the report for the pilot project. d) Bahagian Sumber dan Teknologi Pendidikan (BSTP), KPM will come out with the list of school for pilot project e) The pilot project will involve 100 schools in Malaysia and involve 3000 students	M			

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	ii) BENGKEL PEMURNIAN a) Bidder to present the finding and report of the pilot project. b) Bidder to share the amendments that needs to be done. Deliverables: 1. Pilot reports and documentation. 2. Suggestions for improvements to the module to facilitate access.				
2.3	**STAGE 3: USER ACCEPTANCE TEST (UAT), VULNERABILTY ACCEPTANCE TEST (VAPT), FINAL ACCEPTANCE TEST (FAT),DEPLOYMENT, AND COMMISSIONING.** i) UAT & FAT a) Bidder to prepare the UAT documents. b) Bidder to do the changes (if needed) based on the UAT process. c) Bidder to prepare the image of the platform and email to CSM once the platform is finalized by CSM and the third party appointed by CSM. d) Bidder to prepare the FAT documents and handover to CSM	M			

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	ii) VAPT
	
	    a) VAPT will be handled by the third party appointed by CSM.
	    b) VAPT cost by the third party will be borne by CSM.
	    c) CSM will notify bidder to be ready and standby on-site during the VAPT and do the changes according to the recommendation.
	    d) Bidder will need to be available through the VAPT process.
	
	iii) DEPLOYMENT OF THE E-LEARNING MODULE PLATFORM
	
	    a) Deployment will be done by the successful bidder at the End User Data Centre (Ministry of Education).				

C	**WARRANTY, SUPPORT, AND MAINTENANCE REQUIREMENT**				
1.0	The platform **MUST** have six (6) months warranty period from the date of acceptance by CyberSecurity Malaysia.	M			
2.0	Bidder is required to have an established technical support set-up in Malaysia.	M			
3.0	Bidder **MUST** possess technical support personnel. Bidder to specify the number of personnel.	M			
4.0	Bidder **MUST** provide technical support during weekend or public holiday.	M			

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SEBUTHARGA NO.:SH/10/2024
SCOPE OF WORKS, TECHNICAL SPECIFICATIONS & REQUIREMENTS

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5.0	Bidder is required to specify on any special requirement to provide onsite support.	G			
6.0	Bidder is required to provide technical support and team during Pilot Project either at base or selected location for the pilot project.	M			
7.0	Bidder **MUST** provide the details on the preventive maintenance schedule and Service Level Agreement (SLA) including voice call helpline support (working hours) and within 24 hours respond via email during pilot project.	M			

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APPENDIX 1
(*MANDATORY REQUIREMENTS- THESE ARE ESSENTIAL/CRITICAL requirements that MUST be fully complied by Bidder)*

PLATFORM DEVELOPMENT

The development/enhancement of e-Learning module MUST be developed in the existing platform with the following requirements:

The Etika Siber Nasional (ESN) e-Learning Platform was developed using the following technology stack:

- Laravel 9.x
- PHP 8.x
- MySQL 8.x

Recommended web server:

- Ubuntu 23.10

Server requirement from CSM:

1. **Load Balancer Server:**
   1. Intel Xeon E5 or E7 series, or equivalent AMD processors.
   2. 16GB RAM
2. **3 x Application Web Servers:**
   1. CPU: Multi-core processors (e.g., 8-core/16-thread)
   2. RAM: 32 GB per server
   3. Storage: SSD with min 2TB storage
3. **1x Primary MySQL Database Server**
   1. CPU: Multi-core processors (e.g. 12-core/24-thread Intel Xeon or AMD EPYC processor)
   2. RAM: 64 GB per server
   3. Storage: SSD with min 3TB storage
4. **1x Replica MySQL Database Server**
   1. CPU: Multi-core processors (e.g. 8-core/16-thread processor)
   2. RAM: 64 GB per server
   3. Storage: SSD with min 3TB storage

i. Primary School (2 modules)

a) Module Rendah 1 : Tahap 1 (Tahun 1, 2 & 3)
b) Module Rendah 2 : Tahap 2 (Tahun 4, 5 & 6)

ii. Secondary School (2 modules)

a) Module Menengah 1 : Menengah Rendah (Tingkatan 1, 2 & 3)
b) Module Menengah 2 : Menengah Atas (Tingkatan 4 & 5)

Platform features :-
i) Curriculum feedback
   i. To provide feedback on the curriculum of the subjects that has been provided by CSM and may include providing feedback on the title, topic and learning outcomes for each of the topics as well as the design of learning activities.

ii) Course design
   i. Assisting in the development of the structure of course with content, learning activities and assessment that are aligned with the course learning outcomes and conform to the curriculum stipulated by CSM.
   ii. Provide the necessary graphic design related to the content and learning activities.

iii) Content Setup
   i. Develop the e-content from the curriculum stipulated by CSM in the form of static content, interactive contents, graphics, videos and other media format deemed necessary to make learning fun and engaging.
   ii. Create the online courses that correspond to the content provided by CSM

iii. The content is developed and made available to the activities to create engaging and collaborative learning environment

iv) Learning activities
    i. The design learning activities are provided around the content to create the learning environment that is engaging for the students.
    ii. The design of the activities is explorative and collaborative in nature to stimulate high order and critical thinking skills among students.

v) Assessment
    i. Develop the assessment that are based on the content and learning activities and aligned with the course learning outcomes.

vi) Platform
    i. Provide the suitable social based platform that are stable and can be accessed 24/7 without interruption (max 1000 persons per session) and respond time should not exceed 5 seconds.
    ii. Within the platform, there must be tools to create the community of learners among the students so that they can collaborate socially, tools for the student to undertake the learning activities and construct their own knowledge.
    iii. Provide data analytics for the purpose of monitoring and intervention.
    iv. Must be user and devices friendly

vii) Course completion
    i. Provide badge to student who has completed each session either topics or module.
    ii. Provide the certificate of completion to the students at the end of each module

viii) Online tutorial
    i. Provide the guideline how to use the platform for teachers and students.
    ii. Provide the online video tutorial for teachers on how to use the platform and facilitating the students in their learning.

NON-FUNCTIONAL REQUIREMENT

SECURITY

1. The platform must be passed with the Vulnerability Assessment and Penetration Testing (VAPT) conducted by Third Party appointed by CSM after User Acceptance Test (UAT) exercise.

2. The platform must be equipped with timeout session management for users (recommended - 15 minutes).

3. Session management for online platform must only allow single session at one time.

4. The platform **MUST** use secure protocols (e.g., SSL).

5. Source code shall not reveal any confidential information.

6. User access privileges have to be spelled out and well documented.

LOG

1. The platform MUST be able to generate log for audit purposes (e.g. activity logs for admin and user).

2. Ensure that log files were stored in a location with adequate size spaces, log files should be partitioned separately.

MAINTENANCE

1. The platform MUST be able to provide backup function.

2. Source code shall belong to CyberSecurity Malaysia.

3. The platform must be scalable for future enhancement.