QUALIFICATION FILE

MERN Stack Developer

☒ **Short Term Training (STT)** ☐ **Long Term Training (LTT)** ☐ **Apprenticeship**

☐ **Upskilling** ☐ **Dual/Flexi Qualification** ☐ **For ToT** ☐ **For ToA**

☒**General** ☐ **Multi-skill (MS)** ☐ **Cross Sectoral (CS)** ☒ **Future Skills** ☐ **OEM**

NCrF/NSQF Level: 5

Submitted By:

Additional Skill Acquisition Programme (ASAP) Kerala

KINFRA Film and Video Park, Sainik School P. O.

Kazhakkoottam, Thiruvananthapuram, Kerala 695585

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Section 1: Basic Details

1.	**Qualification Name**	MERN Stack Developer	
2.	**Sector/s**	IT-ITes	
3.	**Type of Qualification:** ☒ **New** ☐ **Revised** ☐ **Has Electives/Options** ☐**OEM**	**NQR Code & version of existing/previous qualification:** *QG-05-IT-03518-2025-V1-ASAP*	**Qualification Name of existing/previous version:** **NA**
4.	a. **OEM Name** b. **Qualification Name** (*Wherever applicable*)	**NA**	
5.	**National Qualification Register (NQR) Code &Version** (*Will be issued after NSQC approval*)	QG-05-IT-03518-2025-V1-ASAP, Version 1.0	**6. NCrF/NSQF Level:** *5*
7.	**Award (Certificate/Diploma/Advance Diploma/ Any Other)** (*Wherever applicable specify multiple entry/exits also & provide details in annexure*)	Certificate	
8.	**Brief Description of the Qualification**	This comprehensive certificate program equips the students to build modern, interactive web applications with frameworks like ReactJS and Next.js, while mastering data management with databases like MySQL and MongoDB, all powered by server-side development with Node.js and modern development practices.	
9.	**Eligibility Criteria for Entry for Student/Trainee/Learner/Employee**	a. **Entry Qualification & Relevant Experience:** <table><tr><td>No.</td><td>Minimum qualification</td><td>Experience required</td></tr><tr><td>1</td><td>Completed 2nd year of 3 – year/4- years UG* Pre requisite: Basic programming knowledge is recommended</td><td>No Experience required</td></tr><tr><td>2</td><td>Completed 2nd year of diploma (after 12th)</td><td>No Experience required</td></tr></table>	

	Pre requisite: Basic programming knowledge is recommended	
3	Completed 3-year diploma after 10th	1 year relevant experience
4	Completed 1st year of 3-year/4 –years UG*	1 year relevant experience
5	12th Grade Pass	2 year relevant experience

*any Engineering degree, BCA,BSC – CS/IT/Circuit branches

b. **Age:** <Please specify age only in case of any legal restrictions>

10.	**Credits Assigned to this Qualification, Subject to Assessment** *(as per National Credit Framework (NCrF))*	18	11. **Common Cost Norm Category (I/II/III)** *(wherever applicable)*: NA
12.	**Any Licensing requirements for Undertaking Training on This Qualification** *(wherever applicable)*	NA	

13.	**Training Duration by Modes of Training Delivery** *(Specify **Total Duration** as per selected training delivery modes and as per requirement of the qualification)*	☒Offline ☒Online ☐Blended

Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)
Classroom (offline/online)	192	258		90	540

14.	**Aligned to NCO/ISCO Code/s** *(if no code is available mention the same)*	2512.0204
15.	**Progression path after attaining the qualification** *(Please show Professional and Academic progression)*	MERN Stack developer < Senior Developer < Team Lead < Project Manager
16.	**Other Indian languages in which the Qualification & Model Curriculum are being submitted**	**Hindi**

17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	☐ Yes ☒ No URLs of similar Qualifications:
18.	Is the Job Role Amenable to Persons with Disability	☐ Yes ☒ No **If "Yes", specify applicable type of Disability:**
19.	How Participation of Women will be Encouraged	ASAP Kerala offers courses in a gender neutral manner, ensuring egalitarian mobilization of of students and providing equal opportunities for all.
20.	Are Greening/ Environment Sustainability Aspects Covered *(Specify the NOS/Module which covers it)*	☐ Yes ☒ No
21.	Is Qualification Suitable to be Offered in Schools/Colleges	Schools ☐ Yes ☒ No Colleges ☒ Yes ☐ No
22.	Name and Contact Details of Submitting / Awarding Body SPOC *(In case of CS or MS, provide details of both Lead AB & Supporting ABs)*	**Name: Dr. Usha Titus IAS (Retd)** **Email: nsqf@asapkerala.gov.in / curriculum@asapkerala.gov.in** **Contact No.:** **Website: www.asapkerala.gov.in**
23.	**Final Approval Date by NSQC:** *18/02/2025*	**24. Validity Duration: 3 Years**	**25. Next Review Date: 18/02/2028**

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Section 2: Module Summary

NOS/s of Qualifications
(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

***Th**.-Theory **Pr.**-Practical **OJT**-On the Job **Man.**-Mandatory Training **Rec.**-Recommended **Proj.**-Project*

S. No	NOS/Module Name	NOS/Module Code & Version *(if applicable)*	Core/ Non- Core	NCrF/ NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT -Ma n.	OJT- Rec.	Tota l	Th.	Pr.	Proj. + Viva		Total	Weightag e (%) *(if applicable)*
1.	Introduction to MERN	ASP/ITS/N0501	Core	5	1	12	18	-	-	30	10	10	-	-	20	NA
2.	Javascript and Typescript Fundamentals	ASP/ITS/N0502	Core	5	3	35	55	-	20	90	10	10	-	-	20	NA
3.	Building Web applications with React and Next.js	ASP/ITS/N0503	Core	5	3	36	54	-	20	90	10	10	-	-	20	NA
4.	Building with Database: MongoDB for developers	ASP/ITS/N0504	Core	5	2	25	35	-	20	60	10	10	-	-	20	NA
5.	NodeJS for Backend development	ASP/ITS/N0505	Core	5	2	24	36	-	30	60	10	10	-	-	20	NA
6.	Employability Skills	DGT/VSQ/N01 02	Non - Core	5	2	60	-	-	-	60						NA
7.	OJT	ASP/ITS/N0506			3					90					100	
8.	Project	ASP/ITS/N0507			2					60			90		90	

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S. No	NOS/Module Name	NOS/Module Code & Version *(if applicable)*	Core/ Non-Core	NCrF/ NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks				
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj. + Viva	Total	Weightage (%) *(if applicable)*
Duration (in Hours) / Total Marks					18					540	100		90	290	

Assessment - Minimum Qualifying Percentage
*Please specify **any one** of the following:*

Minimum Pass Percentage – Aggregate at qualification level: 50% *(Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)*

Section 3: Training Related

1.	**Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	Educational Qualification: Minimum bachelor's degree in Engineering (preferably Mech/CS/IT/Cyber security/AI/EC/EEE) with 2 years' experience in IT Job roles/Software Development or Bachelor degree in computer applications (BCA)/ Bachelor of Science in CS/IT with 3 years experience in IT Job roles/Software Development. Training experience: Minimum 1-year experience. Certification: "Trainer" mapped to the Qualification Pack "MEP/Q2601, V2.0" Minimum accepted score is 80% aggregate.
2.	**Master Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	Educational Qualification: Minimum bachelor's degree in Engineering (preferably Mech/CS/IT/Cyber security/AI/EC/EEE) with 2 years' experience in IT Job roles/Software Development or Bachelor degree in computer applications (BCA)/ Bachelor of Science in CS/IT with 3 years experience in IT Job roles/Software Development. Training experience: Minimum 1-year experience
3.	**Tools and Equipment Required for Training**	☒Yes ☐No *(If "Yes", details to be provided in Annexure)*
4.	**In Case of Revised Qualification, Details of Any Upskilling Required for Trainer**	

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Section 4: Assessment Related

1.	**Assessor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	Educational Qualification: Minimum bachelor's degree in Engineering (preferably Mech/CS/IT/Cyber security/AI/EC/EEE) with 2 years' experience in IT Job roles/Software Development or Bachelor degree in computer applications (BCA)/ Bachelor of Science in CS/IT with 3 years experience in IT Job roles/Software Development. Certified for the Job Role "Assessor (VET and Skills), mapped to the Qualification Pack "MEP/Q2701,V2.0" with minimum score of 80%.
2.	**Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	Bachelor Degree in Engineering/Arts/Science preferably in CS/IT
3.	**Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	Bachelor Degree in Engineering/Arts/Science preferably in CS/IT
4.	**Assessment Mode** *(Specify the assessment mode)*	Offline assessment at ASAP Community skill Parks or online assessment through AI Proctored Platform- Invigilate
5.	**Tools and Equipment Required for Assessment**	☒ Same as for training ☐ Yes ☐ No *(details to be provided in Annexure-if it is different for Assessment)*

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

<u>1.</u>	**Latest Skill Gap Study (not older than 2 years) (Yes/No):** Yes
<u>2.</u>	**Latest Market Research Reports or any other source (not older than 2 years) (Yes/No):** Yes
<u>3.</u>	**Government /Industry initiatives/ requirement (Yes/No):** No
<u>4.</u>	**Number of Industry validation provided:** 10
5.	**Estimated nos. of persons to be trained and employed:** 500 +
6.	**Evidence of Concurrence/Consultation with Line Ministry/State Departments:** *Yes* If "No", why:

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Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	**Annexure:** NCrF/NSQF level justification based on NCrF level/NSQF descriptors *(Mandatory)*	*Annexure added*
2.	**Annexure:** List of tools and equipment relevant for qualification *(Mandatory, except in case of online course)*	*Annexure added*
3.	**Annexure:** Detailed Assessment Criteria *(Mandatory)*	*Annexure added*
4.	**Annexure:** Assessment Strategy *(Mandatory)*	*Annexure added*
5.	**Annexure:** Blended Learning *(Mandatory, in case selected Mode of delivery is "Blended Learning")*	*Not Applicable*
6.	**Annexure:** Multiple Entry-Exit Details *(Mandatory, in case qualification has multiple Entry-Exit)*	*Not Applicable*
7.	**Annexure:** Acronym and Glossary *(Optional)*	*Annexure added*
8.	**Supporting Document:** Model Curriculum *(Mandatory – Public view)*	*Supporting document added*
9.	**Supporting Document:** Career Progression *(Mandatory - Public view)*	*Supporting document added*
10.	**Supporting Document:** Occupational Map *(Mandatory)*	*Supporting document added*
11.	**Supporting Document:** Assessment SOP *(Mandatory)*	*Supporting document added*
12.	**Any other document you wish to submit:**	

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Annexure: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Professional Theoretical Knowledge/Process	Deeper knowledge and understanding of specialized skills of software development and its underlying principle. To solve problems related to software development by selecting appropriate information, methods, tools	Deeper knowledge and understanding of specialized field of technology / skills/ job role and its underlying Principles. Acquired specialized knowledge and a range of cognitive and practical skills to accomplish tasks like basic design, prototyping, testing so as to solve a problem by selecting appropriate information, methods, tools, and materials.	5
Professional and Technical Skills/ Expertise/ Professional Knowledge	Possess a range of technical skills in several tools, softwares and applications in broad range of activities, Skill to clearly identify relavant tools. Good in data collecting organizing information, analysis and communication of results for informed decision making.	Possesses a range of professional and technical skills, displays clarity of knowledge and practice in broad range of activities/ tasks. Skill to clearly identify the relevant tools or sometimes improvise the available tools and techniques; and has advance knowledge of materials in difficult situations and different contexts. Very good in data collecting organizing information, analysis and communication of results for informed decision making.	5
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	Organisation and Time Management. Very good in complex calculations, and mathematical and financial analysis skills for applied solutions. May have an entrepreneurial Mind-set for creating a start-up/ small businesses and its end to end management	Organisation and Time Management. Very good in complex calculations, and mathematical and financial analysis skills for applied solutions. May have an entrepreneurial. Mind-set for creating a start- up/ small businesses and its end to end management	5

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Broad Learning Outcomes/Core Skill	Apply acquired knowledge in different tools to prototype/develop/design web applications. Takes responsibility for the nature and quality of outputs. Is able to work on processes to improve the quality of outputs .Can analyze and synthesize ideas	Apply the acquired specialized knowledge and a range of cognitive and practical skills to accomplish tasks like basic design, prototyping, testing so as to solve problems by selecting appropriate information, methods, tools, and materials. make judgement and take decision, based on the analysis and evaluation of information, for determining solutions to a variety of unpredictable problems associated with the chosen fields of learning. Takes responsibility for the nature and quality of outputs. Is able to work on processes to improve the quality of outputs. Can analyze and synthesize ideas	5
Responsibility	Matches with the level 5 , Completing the course student will be able to start the career in a job role of junior Software engineer or Junior developer in the industry.	At level 5.0 the candidate is a Technical supervisor or junior/ deputy manager. Is accountable for determining and achieving personal and /or group tangible outcomes. Handles/ / adapts/accommodates change requirements and change management at the ground/ shop floor level.Team Building. Manages processes and procedures within broad parameters for defined activities.	5

Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment
Batch Size: 30

Sl No	Tool/Equipment Name	Specifications	Quantity
1	Presentation Tools	Software for creating presentations (e.g., Microsoft PowerPoint, Google Slides)	1
2	Text Editor/ VS Code	Code editor for writing and editing code (Visual Studio Code is a popular option)	1
3	Web Browser	Software application for accessing and interacting with websites (e.g., Google Chrome, Mozilla Firefox)	1
4	HTML Documentation	Online resources and reference materials for HyperText Markup Language (HTML)	(Online Resource)
5	CSS Documentation	Online resources and reference materials for Cascading Style Sheets (CSS)	(Online Resource)
6	Javascript info	Interactive website for learning JavaScript	(Online Resource)
7	MDN (Mozilla Developer Network)	Comprehensive documentation for web technologies from Mozilla	(Online Resource)
8	ReactJS Official Docs	Official documentation for the React.js library	(Online Resource)
9	npm Docs	Documentation for the Node Package Manager (npm)	(Online Resource)
10	Jest Official Docs	Documentation for the Jest testing framework	(Online Resource)
11	MySQL Documentation	Official documentation for the MySQL relational database management system	(Online Resource)
12	MongoDB Documentation	Official documentation for the MongoDB NoSQL database management system	(Online Resource)
13	MongoDB Shell ,	Command-line interface for interacting with MongoDB databases	(Software installed on development machine)
14	NodeJS Documentation	Official documentation for the Node.js JavaScript runtime environment	(Online Resource)

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15	ExpressJS Documentation	Official documentation for the Express.js web framework for Node.js	(Online Resource)
16	Docker Documentation (Optional)	Documentation for containerization platform Docker (used for deploying applications)	(Online Resource)
17	Kubernetes Documentation (Optional)	Documentation for container orchestration platform Kubernetes (used for managing deployments)	(Online Resource)
18	Serverless Framework Documentation (Optional)	Documentation for the Serverless Framework for deploying serverless applications	(Online Resource)
19	Redis Documentation (Optional)	Documentation for the Redis in-memory data store	(Online Resource)
20	Typescript Documentation (Optional)	Documentation for the TypeScript superset of JavaScript	(Online Resource)

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Projector
2. Laptops/Computer

Annexure: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile *(if available)*
1	IBS Software Pvt. Ltd.	Aadith Sankar	Lead Solution Engineer	Technopark Campus Phase 1, Kazhakoottam , Trivandrum, Kerala- 695581	8089110260	Adith.sakar@ibsplc.com	
2	Experion Technologies	Surya Devarajan	Technology Lead	Experion Technologies, Technopark, Trivandrum, Kerala	9605664440	Suryadevarajan.m@gmail.com	
3	Experion Technologies	Sachin Kumar	Technology Lead	Experion Technologies, Technopark, Trivandrum, Kerala	9567902528	Sachinkumars710@gmail.com	
4	Experion Technologies	Ansal Ali	Associate Software Architect	Experion Technologies, Technopark, Trivandrum, Kerala	9567 830 230	ansalibrahim@gmail.com	
5	One Team Solutions Edtech Pvt Ltd.	Arjun V.	CEO	One Team Solutions Edtech Pvt Ltd., Ernakulam, Kerala	9562813713	arjun@oneteamsolutions.co.in	
6	SRV IT Hub Pvt. Ltd.	Vijith K. P.	Managing Director	SRV IT Hub Pvt. Ltd., 3rd Floor, Down Town Complex, Talap,	9446593454	vijith@srvinfotech.in	

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				Kannur- 670002, Kerala			
7	Experion Technologies Pvt. Ltd	Siji B. J.	Senior Software Engineer	Experion Technologies, Technopark, Trivandrum, Kerala	9526315656	Sijibj1996@gmail.com	
8	Just Answer.com	Aravind A	Senior Software Engineer	JustAnswer.com 69, Golden Millenium, 1, Millers Rd, Smartworks, Bengaluru, Karnataka	997592443	aravind.anil@justanswer.com	
9	Enfin Technologies Ltd.	Sajan T.	CTO	Enfin Technologies India Pvt.Ltd. Austin,TX | Bengaluru, KA | Trivandrum, KL	8589880844	sajan.c@enfintechnologies.com	
10	Ihive Technologies	Vivek Devadas	COO	iHive Technologies ICFOSS Swatantra, South Pavilion, Sports Hub, Karyavattom, Trivandrum – 695581 www.ihive.in	94956 54609	mail@ihive.in	

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Annexure: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities
2024-25	200+	200+	200+	200+	200+	200+
2025-26	200+	200+	200+	200+	200+	200+
2026-27	200+	200+	200+	200+	200+	200+

Data to be provided year-wise for next 3 years

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Annexure: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
NOS ASP/ITS/N0501: Introduction to MERN	Demonstrate theoretical knowledge of web development fundamentals, HTML functionalities, and CSS styling techniques.	10	10	--	--
	Write clean, well-structured, and commented HTML and CSS code to create basic web pages and apply styling.				
	Build responsive layouts that adapt to different screen sizes. Implement form functionalities and handle user input data.				
Total Marks					
NOS ASP/ITS/N0502: Javascript and Typescript Fundamentals	Demonstrate a solid understanding of JavaScript fundamentals (syntax, variables, data types, operators, control flow).	10	10	--	--
	Write clean and efficient JavaScript code to perform basic operations, manipulate data structures (arrays, objects), and interact with the DOM.				
	Handle asynchronous tasks effectively using promises, async/await, and callbacks to create responsive web applications.				
	Apply type annotations in TypeScript code to improve code clarity, reduce errors, and enhance code maintainability.				
	Effectively utilize TypeScript features like interfaces, functions, classes, and modules to organize and structure code.				
Total Marks					
NOS ASP/ITS/N0503 : Building Web applications with React and Next.js	Demonstrate a solid understanding of React core concepts (components, state management, JSX, Virtual DOM).	10	10	--	--
	Build dynamic and responsive user interfaces (UIs) using React components with effective state management techniques (Redux, Zustand, or alternatives).				
	Effectively handle user interactions, data fetching from APIs, and navigation between views within React applications.				
	Explain the advantages of Next.js over vanilla React and its overall approach to building web applications.				

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	Structure Next.js projects effectively with pages, layouts, and implement routing for smooth user navigation.				
	Implement different rendering approaches (SSG, SSR, CSR) within Next.js applications, understanding their use cases and performance implications.				
	Utilize client and server components effectively within Next.js projects for a modular and performant architecture.				
	Practice data fetching patterns, caching, revalidation techniques, and server actions within Next.js applications to optimize performance and maintainability.				
Total Marks					
NOS ASP/ITS/N0504 Building with Database: MongoDB for developers	Explain the concept of databases and their importance in web applications for data storage and retrieval.	10	10	--	--
	Differentiate between relational and NoSQL databases, understanding the core principles of MySQL and MongoDB.				
	Identify different MySQL storage engines and when to choose a specific engine for optimal performance (basic understanding).				
	Demonstrate proficiency in creating and managing MySQL databases and tables using SQL commands.				
	Write basic SQL queries to insert, update, delete, and retrieve data from MySQL tables.				
	Utilize the WHERE clause within SELECT statements to filter data based on specific conditions.				
	Explain the core concepts of MongoDB, including its document-oriented structure and key differences from relational databases.				
	Create and manage MongoDB databases and collections using tools like the command line or MongoDB Compass.				
	Write basic queries using the find command and manipulate results using projection and operators to filter data.				
Total Marks					
NOS ASP/ITS/N0505 NodeJS for Backend development	Demonstrate a solid understanding of Node.js fundamentals (event-driven architecture, non-blocking I/O) and its advantages for web development.	10	10	--	--
	Utilize modules effectively, manage packages with npm, and structure projects with clear organization (package.json).				

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Build dynamic web applications using Express.js, implementing middleware, routing logic, handling user interactions (forms, queries), and connecting to databases.				
Integrate MongoDB with Node.js applications using Mongoose for Object Data Modeling (ODM) and perform CRUD operations (Create, Read, Update, Delete) effectively.				
Demonstrate a solid understanding of Node.js fundamentals (event-driven architecture, non-blocking I/O) and its advantages for web development.				
Utilize modules effectively, manage packages with npm, and structure projects with clear organization (package.json).				
Describe various deployment options for Node.js applications (e.g., Heroku, AWS) and strategies for scaling to handle increased workloads (horizontal & vertical scaling, load balancing).				
Identify and troubleshoot performance bottlenecks within Node.js applications using profiling tools.				
Implement caching mechanisms (e.g., Redis) to improve application performance and user experience.				
Total Marks	**50**	**50**	**-**	**-**
Grand Total	**100**		**-**	

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Annexure: Assessment Strategy

This section includes the processes involved in identifying, gathering and interpreting information to evaluate the learner on the required competencies of the program.This section outlines the processes for identifying, gathering and interpreting information to evaluate learners against the required competencies of the program. The assessment strategy is designed to ensure assessments are valid, reliable, fair and aligning with the National Skills Qualifications Framework (NSQF).

Assessment Framework

ASAP employs a structured assessment framework that assigns weightage to various activities throughout the training program. The components of assessment include Attendance, Assignments, Internal/Continuous Assessments, Project and Final Assessments, with Attendance and Internal Assessments falling under Continuous and Comprehensive Evaluation (CCE). All assessments will reflect as marks, culminating in an overall grade indicated on the report card or certificate.

Type of Assessments and Distribution of Marks			
Theory (40%)		**Practical (60%)**	
Type of Assessment	**Max Marks**	**Type of Assessment**	**Max Marks**
Assignment 1	35	Practical Assignment 1	20
Internal Assessment 1	50	Internal Practical assessment 1	40
Assignment 2	35	Practical Assignment 2	20
Internal Assessment 2	50	Internal Practical assessment 2	40
Final Assessment	100	Final Practical/OJT/Internship	100
Attendance	30	Final Project + Viva	50
		Attendance	30
Total	**300**	**Total**	**300**

Weightages for IT-ITeS Courses

For courses aligned with NSQF at Level 5 and above, the assessment weightage is distributed as, 40% from the Theory part and 60% from the Practical components.

Attendance Criteria

Skill based sessions and training are delivered through lectures, discussions, demonstrations, and experiments ensuring student participation during daily learning activities. So those who miss such sessions will not be able to compensate for the loss. Regular student participation in daily classroom. activities plays a significant role in student's success. For each course and batch, the student's attendance will be marked daily, and marks will be awarded based on the following Table on course completion and final assessment. Students whose attendance fall below 70% will not be eligible for final assessment and course completion certificate.

Attendance and Mark Distribution	
Attendance Percentage	**Marks**
Above 90%	10
86 to 90%	9
80 to 85%	8
70 to 80%	7
Below 70%	0

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Internal/Continuous Assessment & Student Involvement

A Continuous and Comprehensive Evaluation (CCE) shall be done for candidates for the assignments and internal assessments. The outcome-based assessment followed by the Assessment Division for the courses offered will conduct the Knowledge and Application level tests at least four times during a skill course as Assignments and Internal/Continuous Assessments.

Assignments (Theory & practical)

Students can complete assignments according to his/her preferred approach. This might involve reading technical study materials, chapters and assigned reading materials to gain a better understanding prior to completing an assignment or exploring new resources to gain additional information. There shall be no restriction on the resources that the students are allowed to consult or any limit to the number of hours he/she choose to spend on the assignment. Since each student employs his/her own personal learning style, an individual assignment may actually be a fairer measure of the student's learning.

Students have to complete two assignments, the first after coverage of 25% of the total syllabus and the second assignment after the coverage of 75% of the total syllabus. Both assignments shall be evaluated and assigned a score. The scores should be marked on the student's assignment sheets by the Trainer after evaluation. The scores shall be entered in the student profile twice. The first shall be made on completion of 25% of the initial part of the syllabus and the second entry shall be made on completion of 75% of the syllabus.

Internal/Continuous Assessment (Theory & practical)

There are two internal tests, one after completing 50% of the syllabus and the other at the end of the training/course. These tests are conducted by the trainer based on the topics covered in the course. Questions are selected at random from the question bank already generated. Of these, for each test, 60% of the questions are theoretical and in the form of objective type and the rest 40% will be descriptive questions which will be oriented towards procedure/strategies/ways of doing/ ethics of doing etc. The duration of the first test after 50% of the total coverage is 1 hr and the second test after completion of the total syllabus is 3hrs.The duration is so fixed to ensure coverage of the total learning events before the final assessments. The marks/grades shall be entered in the student's profile twice. The first entry shall be made on completion of the 50% of the initial syllabus and the second entry shall be made on completion of the rest of the syllabus.

Course Final/End Assessment

The performance-based Final/End Assessment include the following and the assessment will be conducted by the Assessment division of ASAP Kerala.
a) Practical test/Hands on experience/Skill test in an OJT Centre or Skill Development Center
b) Project Presentation and Viva voce
c) Final Assessment with MCQ and Descriptive questions.

Responsibility of Assessment Division of ASAP Kerala

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Final assessment will be conducted by ASAP Kerala. The questions will be generated randomly from the question bank. The Assessment Division of ASAP Kerala will coordinate the assessment process with the Cluster, Training and Curriculum Division.

The Assessment Division with support of the Curriculum Division and Cluster will prepare the Question Bank. The Question Bank is prepared at the time of initial course creation by Subject Matter Experts identified by Curriculum division in consultation with respective Cluster. For courses already created the question banks are prepared by the Assessment Division, Cluster and Curriculum Division in consultation with the Training Division. The Question Bank will be used to prepare the question paper for the final assessment. The assessment division shall conduct the assessment through the assessors. The assessment shall be monitored by the assessors on the assessment platform. The final answer sheets shall be evaluated by experts in the field and the final scores with grades shall be shared by assessment division to the certification division for final certificate issue.

Randomly selected questions from the Question bank developed will be used for Final Assessments. 20% of questions will be replaced with new ones every year and a blue print that elaborates weightage to QP/NOS, degree of difficulty and application type questions will be used for the assessment. This will be done by a committee formed from members of cluster, training, curriculum and assessment division.

A Question Bank will be developed by experts following prescribed norms. Selected questions will be enlisted in the bank. The Question Bank will have 6 times the requirement of questions for the first year to start with and thereafter 20% questions will be replaced every year with new ones in each category with the help of experts following the same procedures to ensure relevance and variety.Each batch will have a unique user id and the trainer will be given access to the Question Bank once for each category of the test. They will be given access to the test only at the prescribed hour on the day of assessment.

Question paper will be generated from the Question Bank at random following the criteria specified for assessing each competency given in the session assessment evidence. Guidelines will be given to the trainers in terms of evaluation of assignments and internal tests.

Final Score and Grading Scheme

ASAP Kerala shall follow the Grading against the score given in the Table.

Score and Grade Conversion		
Percentage Score	**Letter Grade**	**Description**
90-100	**A+**	Excellent
80-89	**A**	Very Good
70-79	**B**	Good

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60-69	**C**	Above Average
50-59	**P**	Pass
Below 50	**F**	Fail

1.Assessment System Overview

- Assessment division of ASAP Kerala shall be responsible for conducting the assessment.
- Question bank shall be prepared in advance by the division.
- Assessments shall be conducted at ASAP Community skill parks/Accredited training centres/Colleges/AI proctored assessment platform.

2. Testing Environment

- Assessments shall be conducted at ASAP community skill parks/Accredited training centres/Colleges or through AI proctored assessment platform.

3. Assessment Quality assurance levels/framework

- Questions papers are created and finalised by subject matter experts considering the level and assessment criteria.

4. Types of Evidence or evidence gathering protocol

- ID Card details of students shall be checked before entering the examination centre.

5. Method of Verification or validation

- ID Card details of students, face verification through the online platform

6. Method for assessment documentation, archiving and access.

- Answer papers and attendance sheets shall be collected by the manager of the centre/faculties at colleges and shall be handed over to the assessment division in case of offline assessments.
- AI Proctored platform shall be used in case of online assessments. Final report with attendance data, answer sheets , AI detected videos/images shall be shared by the technical team to the assessment team.

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Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf

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