

QUALIFICATION FILE: Advanced Diploma in Android Application Development (Level 6)

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NSDA REFERENCE

To be added by NSDA

QUALIFICATION FILE – CONTACT DETAILS OF SUBMITTING BODY

Name and address of submitting body:

NATIONAL INSTITUTE OF ELECTRONICS AND INFORMATION TECHNOLOGY (NIELIT),
NIT CAMPUS POST,
CALICUT, KERALA.
PIN – 673601.

Name and contact details of individual dealing with the submission

Name: Ms.Sini S Nair
Designation: Principal Technical Officer
Mobile: +91 9447335996
Email: sini@nielit.gov.in, sini@calicut.nielit.in

List of documents submitted in support of the Qualifications File

- a) Annexure I– Course Curriculum
- b) Annexure II– Candidates Trained
- c) Annexure III – Placement Details
- d) Annexure IV – Industry Validation
- e) Annexure V – Evidence of job market / Industry requirement
- f) Annexure VI : Occupational Map as identified by IT SSC mapped to Jobroles.

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SUMMARY

Qualification Title:	Advanced Diploma in Android Application Development
Qualification Code	
Nature and purpose of the qualification:	<ul style="list-style-type: none"> ➤ This Qualification is aligned to Level 6 (Advanced Diploma course). ➤ The purpose of this qualification is to train the students to be ready for Android App Developer/Trainee Job.
Body /bodies which will award the qualification:	National Institute of Electronics and Information Technology 6-CGO Complex, Electronics Niketan Lodhi Road, New Delhi. 110003.
Body which will accredit providers to offer courses leading to the qualification:	National Institute of Electronics and Information Technology 6-CGO Complex, Electronics Niketan Lodhi Road, New Delhi. 110003.
Body /bodies which will Be responsible for assessment:	Examination Cell, National Institute of Electronics and Information Technology 6-CGO Complex, Electronics Niketan Lodhi Road, New Delhi. 110003.
Occupation(s) to which the qualification gives access:	Android App Developer Trainee, Software Engineer, System Analysts.
Licensing Requirements	N/A
Proposed level of the qualification in the NSQF	Level 6
Anticipated volume of training/learning required to complete the qualification	420 Hours

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Entry requirements / Recommendations	Diploma in Engineering, Bachelor's Degree in Science/Technology/Computers or any graduate course equivalent to these.
Progression from the Qualification	Academic Progression: PG Diploma Courses → Master Level Courses related to Software Trainee → Android App Developer → Project Leader → Project Manager → Senior manager(Project Planning)
Planned arrangements for RPL.	<ul style="list-style-type: none"> ➤ Presently only candidates who undergo training shall be assessed. ➤ It will be incorporated once RPL strategy is finalized
International Compatibility where Known.	NA
Date of Planned review of the Qualification	After Every 2 Years

Formal Structure of the Qualification			
Title of Component and Identification Code	Mandatory/ Optional	Estimated Size (Learning hours)	Level
Advanced Diploma in Android Application Development (Core Java ,Android , Project) [CSW102A]	M	420	6

Detailed Curriculum attached as – **Annexure I**

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SECTION -1

ASSESSMENT

Name of Assessment body:

Examination Cell,
National Institute of Electronics and Information Technology
6-CGO Complex, Electronics Niketan
Lodhi Road, New Delhi. 110003.

Name of body checking or verifying Assessments:

Examination Cell,
National Institute of Electronics and Information Technology
6-CGO Complex, Electronics Niketan
Lodhi Road, New Delhi. 110003.

Name of Qualification Awarding body:

National Institute of Electronics and Information Technology.

Will the assessment body be responsible for the RPL assessment?

RPL Policy will be described as and when available

Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, consistent and fair and show that these are in line with the requirements of NSQF:

This course would lay more emphasis on developing the practical skills of the student. His overall knowledge shall be tested based on a comprehensive written assessment, his practical skills shall be equally measured with a detailed practical assessment. The communication/technical skills of the student and his ability to express himself shall be tested in Viva Voce Assessment. Each assessment shall define an OUTCOME and marked separately. Student shall be required to pass in all OUTCOMES individually and marks shall be allotted for each OUTCOME along with final aggregate marks in course.

Following assessment methodologies may be used:

A. Written Assessment

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- B. Practical Assessment
- C. Viva Voce Assessment

Supporting evidences for Assessment

The assessment results are backed by following evidences.

1. The assessor collects a copy of the attendance for the training done under the scheme. The attendance sheets are signed and stamped by the In charge / Head of the Training Centre.
2. The assessor verifies the authenticity of the candidate by checking the photo ID card issued by the institute as well as any one Photo ID card issued by the Central/Government. The same is mentioned in the attendance sheet

ASSESSMENT EVIDENCE

Job Role: Android App Developer Trainee, Software Engineer, System Analysts.

Title of Unit/Component: (Detailed Curriculum attached as Annexure-I)

Module	Assessment (Marks)				Job Role
	Theory	Practical	Project	Total	
Core Java Programming	25	25	0	50	Java Developer
Android Application Development & Project	0	25	75	100	Android Developer
Total	25	50	75	150	

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Outcomes to be assessed	Assessment Criteria for the outcome	Means of Assessment			
		Total Marks	Written	Practical	Project & Viva
Demonstrate knowledge of Core Java Programming	Programming with Object Oriented Concepts.	50	25	25	
Develop Android Applications & Project	Developing applications for the Android phone.	100	0	25	75
	GUI features of Android phone				
	Work with the SQLite & MySQL database features.				
	Design, build, package and deploy an Android application to a mobile device.				

Pass/Fail

Following Grading Scheme (on the basis of total marks) will be followed:

Grade	S	A	B	C	D	E	Fail
Marks Range (in %)	≥90%	80%-89%	70%-79%	60%-69%	50%-59%	40-49%	<40%

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SECTION 2

EVIDENCE OF LEVEL

Level of Qualification: 6

Title : Advanced Diploma in .Net Technologies			Level : 6
NSQF Domain	Outcomes of the Qualification/Component	How the job role relates to the NSQF Level Descriptors	NSQF Level
Process required	<p>Individuals in this job role are responsible for using specialized knowledge of software programming languages, framework in software architecture and delivery platforms to develop software for enterprise web environment. They require a command of wide ranging specialized theoretical and practical skills, for application enhancement, debugging, maintenance and documentation.</p> <p>The individual should be able to work in accordance with applicable coding standards, software development methodologies & frameworks and release processes.</p>	Demands a wide range of specialised technical skill, clarity of knowledge and practice in broad range of activity involving standard and non-standard practices.	6
Professional knowledge	<p>Develop applications using Java, and Mobile app using Android. Will learn Activities, Notifications</p> <p>Also, learn to work with the SQLite & MySQL database features and store data in SQLite and MySQL from Android App.</p> <p>In addition 4 weeks project work at the end of each module</p>	Factual and theoretical knowledge in broad contexts within a field of work or study.	6

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<p>Professional skill</p>	<p>Individuals need to have a wide range of cognitive and practical knowledge required for development of software applications and interfaces as well as enhancements to existing packaged applications or pre-engineered templates.</p> <p>He/she needs to know & understand:</p> <ul style="list-style-type: none"> • organization's policies, procedures and guidelines for designing software products and applications • the scope of work to be carried out and the importance of keeping within these boundaries. • Analyse the feedback and use it to improve the coding & entire software quality 	<p>A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study.</p>	<p style="text-align: center;">6</p>
<p>Core skill</p>	<p>Individuals should have good logical and mathematical skills to plan and organize work to achieve targets and deadlines.</p> <p>He/she needs to apply problem solving approaches in different situations and make decisions on suitable course of action.</p>	<p>Reasonable good in mathematical calculation, understanding of social, political and reasonably good in data collecting organising information, and logical communication.</p>	<p style="text-align: center;">6</p>
<p>Responsibility</p>	<p>Individuals are responsible for development of software applications and interfaces as well as enhancements to existing packaged applications or pre-engineered templates.</p> <p>The job also involves providing support to</p>	<p>Responsibility for own work and learning and full responsibility of other's works and learning.</p>	<p style="text-align: center;">6</p>

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	<p>custom applications, debugging, maintenance and documentation.</p> <p>These tasks will require the individual to take responsibility of his/her own work and learning and full responsibility other's work & learning.</p> <p>Individual does not work under supervision and is responsible for his/her own learning as well as others works.</p>		
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SECTION 3

EVIDENCE OF NEED

What evidence is there that the qualification is needed?

This course has been designed to meet the growing demand for skilled professionals in web and mobile application development.

- a) *"Android App Development in Demand" – Article published in 'The new Indian Express' daily, 3rd November 2014.*
- b) *"Java skills demand hits all-time high" Computer weekly.com*
<http://www.computerweekly.com/feature/Java-skills-demand-hits-all-time-high>

What is the estimated uptake of this qualification and what is the basis of this estimate?

Estimated uptake is 15 students / Batch with 2 Batches / Year and on the basis of Facilities and Infrastructure in NIELIT Calicut.

What steps were taken to ensure that the qualification(s) does/do not duplicate already existing or planned qualifications in the NSQF?

This qualification has comprises both technical and analytic skills and can be linked to any qualification higher than this one, existing or to come.

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What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated?

Based on feedback by participants, employers and based on market survey the qualification will be reviewed in every 2 years.

SECTION 4

EVIDENCE OF PROGRESSION

What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?

This course structure is designed in such a way that, the qualification acquired will meet the prerequisites of higher level courses in Software and Mobile App Field. It comprises both technical and analytic skills and can be linked to any existing qualification or higher qualification.

SECTION 5

EVIDENCE OF INTERNATIONAL COMPARABILITY

List any Comparisons which have been established – NIL