

Assessment Evidence Guide

For

“Jr. Programmer/ Network Assistant”

Level-3

Install and Configure WAMP

(Formative Assessment)



**National Vocational & Technical
Training Commission**

Instruction Sheet for the Candidate

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Jr. Programmer/Network Assistant)	CS Code:	Level:3	Version:01
Competency Standard Title: Install and Configure WAMP	Assessment Date (DD/MM/YY): Assessment Time:		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>Assessment Task 1: Candidate is required to install and configure WAMP server 64bit in the computer according to the requirement given by assessor.</p> <p>And complete:</p> <ol style="list-style-type: none"> 1. Knowledge assessment test (Written or Oral) 2. Portfolios at the time of assessment (if any)
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Download latest version of WAMP server setup.</p> <p>Performance Criteria 2: Uninstall old version of WAMP server if installed</p> <p>Performance Criteria 3: Open the downloaded installer file of WAMP server</p> <p>Performance Criteria 4: Complete installation package as per instructional manual.</p> <p>Performance Criteria 5: Run WAMP server from program menu</p> <p>Performance Criteria 6: Configure WAMP server</p>
	Portfolios required at the time of assessment (if any) for

Assessors Judgment Guide

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							

Observation Checklist

Assessment Task 1	Description of Assessment Task 1 Install and configure WAMP server 64bit in the computer according to the requirement.			
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Download latest version of WAMP server setup.			
2.	Uninstall old version of WAMP server if installed			
3.	Open the downloaded installer file of WAMP server			
4.	Complete installation package as per instructional manual.			
5.	Run WAMP server from program menu			
6.	Configure WAMP server			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		
Each Assessment Task (with performance criteria)				

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Jr. Programmer/Network Assistant)	CS Code:	Level: 3	Version: 01
Competency Standard Title: Install and Configure WAMP	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Candidate Details	Name:..... Registration/Roll Number: Candidate Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
1. What is WAMP server?	
2. How to check WAMP server is running normal?	
3. Write usage of WAMP server?	

ANSWER KEY

Sr.	Answers
1.	WAMP is an acronym that stands for Windows, Apache, MySQL, and PHP. It's a software stack which means installing WAMP installs Apache
2.	The small green W icon in your toolbar. If it is red, WAMP services are stopped, green means everything is running while orange means some services are running.
3.	In essence, WAMP is used as a safe space to work on your website, without needing to actually host it online. WAMP also has a control panel. Once you install the software package, all of the services mentioned above (excluding the operating system that is) will be installed on your local machine

Assessment Evidence Guide

For

**“Jr. Programmer/
Network Assistant”**

Level-3

Design Database

(Formative Assessment)



**National Vocational & Technical
Training Commission**

Instruction Sheet for the Candidate

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Jr. Programmer/Network Assistant)	CS Code:	Level: 3	Version: 01
Competency Standard Title: Design Database	Assessment Date (DD/MM/YY): Assessment Time:		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>Assessment Task 1: Candidate is required to create tables, draw UML diagram and establish a relationship between tables for the database as per instructions given by assessor.</p> <p>And complete:</p> <ol style="list-style-type: none"> 1. Knowledge assessment test (Written or Oral) 2. Portfolios at the time of assessment (if any)
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: List down all the tables required for database</p> <p>Performance Criteria 2: List down columns for each table</p> <p>Performance Criteria 3: Create primary keys for each table</p> <p>Performance Criteria 4: Develop relationship for each table if required</p> <p>Performance Criteria 5: Create associate table if required for many to many relationships</p> <p>Performance Criteria 6: Assign foreign keys</p> <p>Performance Criteria 7: Draw UML diagram of identified table</p> <p>Performance Criteria 8: Make relationship between tables</p>

Assessors Judgment Guide

(To be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							

Observation Checklist

Assessment Task 1		Description of Assessment Task 1		
		Create tables, draw UML diagram and establish a relationship between tables for the database.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	List down all the tables required for database			
2.	List down columns for each table			
3.	Create primary keys for each table			
4.	Develop relationship for each table if required			
5.	Create associate table if required for many to many relationships			
6.	Assign foreign keys			
7.	Draw UML diagram of identified table			
8.	Make relationship between tables			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Jr. Programmer/Network Assistant)	CS Code:	Level: 3	Version: 01
Competency Standard Title: Design Database	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Candidate Details	Name:..... Registration/Roll Number: Candidate Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
1. What is primary key?	
2. What is foreign key?	

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
3. What is the purpose of UML (Unified Modeling Language) diagram?	

ANSWER KEY

Sr.	Answers
1.	A primary key is the column or columns that contain values that uniquely identify each row in a table.
2.	A foreign key is a set of attributes in a table that refers to the primary key of another table
3.	The main aim of UML is to define a standard way to visualize the way a system has been designed

Assessment Evidence Guide

For

“Jr. Programmer/ Network Assistant”

Level-3

**Create Database in MySQL Using WAMP
Server**

(Formative Assessment)



**National Vocational & Technical
Training Commission**

Instruction Sheet for the Candidate

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Jr. Programmer/Network Assistant)	CS Code:	Level: 3	Version: 01
Competency Standard Title: Create Database in MySQL Using WAMP Server	Assessment Date (DD/MM/YY): Assessment Time:		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>Assessment Task 1: Candidate is required to create database in MySQL using WAMP server and create tables in the created database as per scenario given by assessor.</p> <p>Assessment Task 2: Candidate is required to drop/truncate created tables using WAMP server as per scenario given by assessor.</p> <p>And complete:</p> <ol style="list-style-type: none"> 1. Knowledge assessment test (Written or Oral) 2. Portfolios at the time of assessment (if any)
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Start WAMP Server</p> <p>Performance Criteria 2: Access PhpMyAdmin command in WAMP server</p> <p>Performance Criteria 3: Create new Database by following the creation wizard</p> <p>Performance Criteria 4: Select the created database</p> <p>Performance Criteria 5: Create table with name “orders” by DDL Query.</p> <p>Performance Criteria 6: Input number of columns as per given data</p> <p>Performance Criteria 7: Create table with name.</p> <p>Performance Criteria 8: Create primary keys for tables</p>

	Assessment Task 2 Performance Criteria 1: Create a table Performance Criteria 2: Insert rows in table Performance Criteria 3: Perform TRUNCATE operation on created table Performance Criteria 4: Perform DROP operation on created table
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Assessors Judgment Guide

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							

Observation Checklist

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of Assessment Task 1 Create database in MySQL using WAMP server and create tables in the created database as per given scenario.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Start WAMP Server			
2.	Access PhpMyAdmin command in WAMP server			
3.	Create new Database by following the creation wizard			
4.	Select the created database			
5.	Create table with name "orders" by DDL Query.			
6.	Input number of columns as per given data			
7.	Create table with name.			
8.	Create primary keys for tables			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 2		Description of Assessment Task 2		
		Drop/truncate created tables using WAMP server as per given scenario.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Create a table			
2.	Insert rows in table			
3.	Perform TRUNCATE operation on created table			
4.	Perform DROP operation on created table			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Jr. Programmer/Network Assistant)	CS Code:	Level: 3	Version: 01
Competency Standard Title: Create Database in MySQL Using WAMP Server	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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candidate Details	Name:..... Registration/Roll Number: Candidate Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
1. What are DDL (Data Definition Language) queries?	
2. What is truncate function in SQL?	
3. What is the use of drop command?	

ANSWER KEY

Sr.	Answers
1.	A DDL is a language used to define data structures and modify data.
2.	It is used to remove all records from a table.
3.	DROP is used to delete a whole database or just a table.

Assessment Evidence Guide

For

“Jr. Programmer/ Network Assistant”

Level-3

**Manipulate and back up the Database using
Structured Query Language (SQL)**

(Formative Assessment)



**National Vocational & Technical
Training Commission**

Instruction Sheet for the Candidate

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Jr. Programmer/Network Assistant)	CS Code:	Level: 3	Version: 01
Competency Standard Title: Manipulate the Database Using Structured Query Language (SQL)	Assessment Date (DD/MM/YY): Assessment Time:		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>Assessment Task 1: Candidate is required to display data provided by the assessor after adding into the table and calculate average and sum of that data by fetching data from the table as per instructions given by assessor.</p> <p>Assessment Task 2: Candidate is required to create database backup in the following backup format using WAMP server</p> <ul style="list-style-type: none"> i. SQL ii. CSV <p>as per instructions given by assessor.</p> <p>Assessment Task 3: Candidate is required to restore any two tables from the database backup from the following backup format using WAMP server</p> <ul style="list-style-type: none"> i. SQL ii. CSV <p>as per instructions given by assessor.</p> <p>And complete:</p> <ol style="list-style-type: none"> 1. Knowledge assessment test (Written or Oral) 2. Portfolios at the time of assessment (if any)

Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Select the table to insert data</p> <p>Performance Criteria 2: Insert data in row using PhpMyAdmin insert wizard</p> <p>Performance Criteria 3: Insert rows by writing SQL query</p> <p>Performance Criteria 4: Perform selection on created table</p> <p>Performance Criteria 5: Select all column from table</p> <p>Performance Criteria 6: Display selected number of columns using select statement</p> <p>Performance Criteria 7: Select unique values of column</p> <p>Performance Criteria 8: Select records using “where” clause as instructed</p> <p>Performance Criteria 9: Apply GROUP BY clause for aggregate functions</p> <p>Performance Criteria 10: Perform select query and show the total count of status in table</p> <p>Performance Criteria 11: Apply “SUM and GROUP BY” clause and join between two tables</p>
	<p>Assessment Task 2</p> <p>Performance Criteria 1: Select the database for backup.</p> <p>Performance Criteria 2: Export database in “SQL” file format.</p> <p>Performance Criteria 3: Select the database for backup</p> <p>Performance Criteria 4: Export database in “CSV” file format</p>
	<p>Assessment Task 3</p> <p>Performance Criteria 1: Create empty database</p> <p>Performance Criteria 2: Restore backup of required database using WAMP server and backup file</p>

Assessors Judgment Guide

(to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							

Observation Checklist

Assessment Task 1	Description of Assessment Task 1 Display data provided by the assessor after adding into the table and calculate average and sum of that data by fetching data from the table		
During the practical assessment, candidate demonstrated the following:	Yes	No	Remarks
1. Select the table to insert data			
2. Insert data in row using PhpMyAdmin insert wizard			
3. Insert rows by writing SQL query			
4. Perform selection on created table			
5. Select all column from table			
6. Display selected number of column using select statement			
7. Select unique values of column			
8. Select records using "where" clause as instructed			
9. Apply GROUP BY clause for aggregate functions			
10. Perform select query and show the total count of status in table			
11. Apply "SUM and GROUP BY" clause and join between two tables			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>	

Assessment Task 2	Description of Assessment Task 2 Create database backup in the following backup format using WAMP server i. SQL ii. CSV		
During the practical assessment, candidate demonstrated the following:	Yes	No	Remarks
1. Select the database for backup.			
2. Export database in "SQL" file format.			
3. Select the database for backup			
4. Export database in "CSV" file format			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>	

Assessment Task 3		Description of Assessment Task 2		
		Restore any two tables from the database backup from the following backup format using WAMP server i. SQL ii. CSV		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Create empty database			
2.	Restore backup of required database using WAMP server and backup file			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Jr. Programmer/Network Assistant)	CS Code:	Level: 3	Version: 01
Competency Standard Title: Manipulate the Database Using Structured Query Language (SQL)	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Candidate Details	Name:..... Registration/Roll Number: Candidate Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
1. What is MySQL?	
2. What is DML?	
3. What is SQL Query?	

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)

4. What is the difference between inner join and right outer join.	
5. What is the difference between SQL and CSV format?	
6. What is relational database?	

ANSWER KEY

Sr.	Answers
1.	MySQL Database Service is a fully managed database service to deploy cloud-native applications.
2.	DML stands for Data Manipulation Language
3.	SQL stands for Structured Query Language which is basically a language used by databases.
4.	Inner join returns only the matching rows between both the tables. Right Join or Right Outer Join returns only the matching rows between both the tables, plus non-matching rows from the right table.
5.	CSV is a simple file format used to store tabular data, SQL is a domain-specific language used in programming and designed for managing data held in a relational database management system,
6.	A database structured to recognize relations between stored items of information.

Assessment Evidence Guide

For

“Jr. Programmer/ Network Assistant”

Level-3

**Install / Configure JDK/ Open JDK (Java
Development Kit)**

(Formative Assessment)



**National Vocational & Technical
Training Commission**

Instruction Sheet for the Candidate

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Jr. Programmer/Network Assistant)	CS Code:	Level: 3	Version: 01
Competency Standard Title: Install / Configure Java Development Kit JDK/ Open JDK (Java)	Assessment Date (DD/MM/YY): Assessment Time:		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>Assessment Task 1: Candidate is required to download and install JDK Java into the computer as per requirement given by assessor.</p> <p>Assessment Task 2: Candidate is required to set and remove environment variables in Java and troubleshoot its configuration as per instructions given by assessor.</p> <p>And complete:</p> <ol style="list-style-type: none"> 1. Knowledge assessment test (Written or Oral) 2. Portfolios at the time of assessment (if any)
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Download JDK version.</p> <p>Performance Criteria 2: Save installer file</p> <p>Performance Criteria 3: Uninstall old version of Java if installed</p> <p>Performance Criteria 4: Perform Complete installation package as per instructional manual</p>

	Assessment Task 2 Performance Criteria 1: Include the java JDK path in “Environment Variable” Performance Criteria 2: Include the java JRE path in “Environment Variable” Performance Criteria 3: Verify Java runtime environment Performance Criteria 4: Troubleshoot Java runtime environment configuration
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Assessors Judgment Guide

(to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							
Each Assessment Task (with performance criteria)							

Observation Checklist

Assessment Task 1		Description of Assessment Task 1 Download and install JDK Java into the computer as per requirement.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Download JDK version.			
2.	Save installer file			
3.	Uninstall old version of Java if installed			
4.	Perform Complete installation package as per instructional manual			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 2		Description of Assessment Task 2 Set and remove environment variables in Java and troubleshoot its configuration.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Include the java JDK path in "Environment Variable"			
2.	Include the java JRE path in "Environment Variable"			
3.	Verify Java runtime environment			
4.	Troubleshoot Java runtime environment configuration			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Jr. Programmer/Network Assistant)	CS Code:	Level: 3	Version: 01
Competency Standard Title: Install / Configure Java Development Kit JDK/ Open JDK (Java)	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Candidate Details	Name:..... Registration/Roll Number: Candidate Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
1. What is difference between JDK, JRE and JVM?	
2. What does JDK do?	
3. What are the components of JDK?	

ANSWER KEY

Sr.	Answers
1.	JDK is a software development kit JRE is a software bundle that allows Java program to run. JVM is an environment for executing bytecode.
2.	The JDK is a development environment for building applications.
3.	<ul style="list-style-type: none">• Java Virtual Machine (JVM)• Java Runtime Environment (JRE)• Java Development Kit (JDK)

Assessment Evidence Guide

For

**“Jr. Programmer/
Network Assistant”**

Level-3

**Install / Configure Eclipse IDE and Run
Simple Programme**

(Formative Assessment)



**National Vocational & Technical
Training Commission**

Instruction Sheet for the Candidate

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Jr. Programmer/Network Assistant)	CS Code:	Level: 3	Version: 01
Competency Standard Title: Install / Configure Eclipse IDE and Run Simple Programme	Assessment Date (DD/MM/YY): Assessment Time :		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>Assessment Task 1: Candidate is required to download and install Eclipse IDE for java as per instructions given by assessor.</p> <p>Assessment Task 2: Candidate is required to configure Eclipse IDE by adding JDK installed directory in Eclipse IDE as per instructions given by assessor.</p> <p>Assessment Task 3: Candidate is required to create a new java project and class in that project using wizard creation in Eclipse IDE & run the program as per instructions given by assessor.</p> <p>Assessment Task 4: Candidate is required to create a simple program of HelloWorld and array sorting that can display its outcome on console as per instructions given by assessor.</p> <p>And complete:</p> <ol style="list-style-type: none"> Knowledge assessment test (Written or Oral) Portfolios at the time of assessment (if any)

Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Check the compatibility of JDK according to Eclipse and system</p> <p>Performance Criteria 2: Download package for “Eclipse IDE for Java EE Developers”</p> <p>Performance Criteria 3: Install Eclipse</p>
	<p>Assessment Task 2</p> <p>Performance Criteria 1: Open Workspace Launcher pop up screen.</p> <p>Performance Criteria 2: Provide directory location for projects workspace</p> <p>Performance Criteria 3: Add JDK installed directory path under “Installed JREs” in eclipse</p>
	<p>Assessment Task 3</p> <p>Performance Criteria 1: Create new java project using project creation wizard in eclipse</p> <p>Performance Criteria 2: Follow the steps in wizard and finish project creation</p> <p>Performance Criteria 3: Create new class in default package</p> <p>Performance Criteria 4: Follow the creation wizard and complete class creation.</p> <p>Performance Criteria 5: Add main function in your class.</p> <p>Assessment Task 4</p> <p>Performance Criteria 1: Open-source file in editor panel</p> <p>Performance Criteria 2: Write print statement in main function to print result in eclipse console</p> <p>Performance Criteria 3: Build and rectify if any error occurs</p> <p>Performance Criteria 4: Run project as java application successfully displaying the result.</p>

Assessors Judgment Guide

(to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							

Observation Checklist

Assessment Task 1		Description of Assessment Task 1 Download and install Eclipse IDE for java as per instructions.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Check the compatibility of JDK according to Eclipse and system			
2.	Download package for "Eclipse IDE for Java EE Developers"			
3.	Install Eclipse			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 2		Description of Assessment Task 2 Configure Eclipse IDE by adding JDK installed directory in Eclipse IDE.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Open Workspace Launcher pop up screen.			
2.	Provide directory location for projects workspace			
3.	Add JDK installed directory path under "Installed JREs" in eclipse			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 3		Description of Assessment Task 3		
		Create a new java project and class in that project using wizard creation in Eclipse IDE & run the program.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Create new java project using project creation wizard in eclipse			
2.	Follow the steps in wizard and finish project creation			
3.	Create new class in default package			
4.	Follow the creation wizard and complete class creation.			
5.	Add main function in your class.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 4		Description of Assessment Task 4		
		Create a simple program of HelloWorld and array sorting that can display its outcome on console.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Open-source file in editor panel			
2.	Write print statement in main function to print result in eclipse console			
3.	Build and rectify if any error occurs			
4.	Run project as java application successfully displaying the result.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Jr. Programmer/Network Assistant)	CS Code:	Level: 3	Version: 01
Competency Standard Title: Install / Configure Eclipse IDE and Run Simple Programme	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Candidate Details	Name:..... Registration/Roll Number: Candidate Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
1. What is Eclipse IDE used for?	
2. Can Eclipse run Python?	
3. What is IDE and SDK?	
4. What is the difference between IDE and API?	

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)

5. What is the difference between framework and SDK?	
6. What is API and give any 02 example?	
7. Is SDK a library?	
8. What is difference between SDK and NDK?	
9. What does Android SDK mean?	

ANSWER KEY

Sr.	Answers
1.	Eclipse is an integrated development environment (IDE) for developing applications using the Java programming language and other programming languages such as C/C++, Python, PERL, Ruby etc.
2.	Yes.
3.	SDK stands for Software Development Kits, and IDE stands for Integrated Development Environment.
4.	APIs provide a communication layer between two applications; one being developed and one already developed. IDEs, being a development environment, are used to develop software programs from the scratch.
5.	Framework is an application or library that is almost ready made. You just fill in some blank spots with your own code that the framework calls SDK is a bigger concept as it can include libraries, frameworks, documentation, tools, etc.
6.	which is a software intermediary that allows two applications to talk to each other. When you use an application on your mobile phone, the application connects to the Internet and sends data to a server.
7.	An SDK (software development kit) is a library (often with extra tool applications, data files and sample code) that aid you in developing code.
8.	SDK is written using java programming language and runs on Dalvik virtual machine. Where NDK uses native code languages like C and C++.
9.	The Android SDK is a software development kit that includes a comprehensive set of development tools.

Assessment Evidence Guide

For

“Jr. Programmer/ Network Assistant”

Level-3

**Create And Run Graphic User Interface (GUI)
Program Using Java**

(Formative Assessment)



**National Vocational & Technical
Training Commission**

Instruction Sheet for the Candidate

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Assistant Programmer)	CS Code:	Level: 3	Version: 01
Competency Standard Title: Create And Run Graphic User Interface (GUI) Program Using Java	Assessment Date (DD/MM/YY): Assessment Time:		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>Assessment Task 1: Candidate is required to create a simple GUI program using java by installing the java plugin in Eclipse IDE as per instructions given by assessor.</p> <p>And complete:</p> <ol style="list-style-type: none"> 1. Knowledge assessment test (Written or Oral) 2. Portfolios at the time of assessment (if any)
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Open Eclipse IDE</p> <p>Performance Criteria 2: Install java plugin in Eclipse</p> <p>Performance Criteria 3: Complete the installation of new software</p> <p>Performance Criteria 4: Restart eclipse</p> <p>Performance Criteria 5: Open Eclipse IDE</p> <p>Performance Criteria 6: Choose Java Project as instructed</p> <p>Performance Criteria 7: Enter the Java project details</p> <p>Performance Criteria 8: Write the class name as per instructions</p> <p>Performance Criteria 9: Write Java code for program for GUI application</p> <p>Performance Criteria 10: Run project as java application</p> <p>Performance Criteria 11: Verify output result in console</p>

Assessors Judgment Guide

(to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	<div style="display: flex; justify-content: space-between;"> COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> </div> Name of the Assessor: Assessor's code: Signature of the Assessor:

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							

Observation Checklist

Assessment Task 1	Description of Assessment Task 1 Create a simple GUI program using java as per instructions by installing the java plugin in Eclipse IDE.		
During the practical assessment, candidate demonstrated the following:	Yes	No	Remarks
1. Open Eclipse IDE			
2. Install java plugin in Eclipse			
3. Complete the installation of new software			
4. Restart eclipse			
5. Open Eclipse IDE			
6. Choose Java Project as instructed			
7. Enter the Java project details			
8. Write the class name as per instructions			
9. Write Java code for program for GUI application			
10. Run project as java application			
11. Verify output result in console			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>	

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Jr. Programmer/Network Assistant)	CS Code:	Level: 3	Version: 01
Competency Standard Title: Create And Run Graphic User Interface (GUI) Program Using Java	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Guidance for Candidate	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Candidate Details	Name:..... Registration/Roll Number: Candidate Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
1. What is difference between Java and JavaFX?	
2. GUI stands for?	
3. What is a plugin?	
4. What does JavaFX stand for?	

ANSWER KEY

Sr.	Answers
1.	No longer scripting language, java fx still can be written. Java is an object-oriented programming language that produces software for multiple platforms.
2.	Graphic User Interface
3.	A plugin is a software add-on that is installed on a program, enhancing its capabilities.
4.	Special EFF-ECTS" as FX is normally the abbreviation given to special effects mostly sound or visual.

Assessment Evidence Guide

For

**“Jr. Programmer/
Network Assistant”**

Level-3

Create and Run Spring Boot Application

(Formative Assessment)



**National Vocational & Technical
Training Commission**

Instruction Sheet for the Candidate

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Jr. Programmer/Network Assistant)	CS Code:	Level: 3	Version: 01
Competency Standard Title: Create and Run Spring Boot Application	Assessment Date (DD/MM/YY): Assessment Time:		

Candidate Details	Name: Registration/Roll Number:
Guidance for Candidate	<p>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration & assessment):</p> <p>Assessment Task 1: Candidate is required to build and run spring boot project, as per instructions, after importing it to Eclipse IDE and compiled by Maven as per instructions given by assessor.</p> <p>And complete:</p> <ol style="list-style-type: none"> 1. Knowledge assessment test (Written or Oral) 2. Portfolios at the time of assessment (if any)

Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you will complete:</p> <p>Assessment Task 1</p> <p>Performance Criteria 1: Open Spring Initializer URL</p> <p>Performance Criteria 2: Create java spring boot web application</p> <p>Performance Criteria 3: Add “spring web” in dependency as instructed</p> <p>Performance Criteria 4: Download created spring boot project</p> <p>Performance Criteria 5: Extract the downloaded project</p> <p>Performance Criteria 6: Launch the Eclipse IDE</p> <p>Performance Criteria 7: Import the extracted spring boot project in Eclipse as “Existing Maven Project”</p> <p>Performance Criteria 8: Perform Maven update and clean install commands on project.</p> <p>Performance Criteria 9: Create new class and named it as per instruction</p> <p>Performance Criteria 10: Add properties in the class as per instructions</p> <p>Performance Criteria 11: Create setter and getter method for class properties</p> <p>Performance Criteria 12: Create constructors for Class</p> <p>Performance Criteria 13: Create spring boot REST Controller Class as per instructions</p> <p>Performance Criteria 14: Add HTTP GET method in REST Controller as per instructions</p> <p>Performance Criteria 15: Perform maven update command on spring boot project</p> <p>Performance Criteria 16: Perform maven clean command on project using eclipse</p> <p>Performance Criteria 17: Perform maven install command on project using eclipse</p> <p>Performance Criteria 18: Compile project successfully using maven in Eclipse</p> <p>Performance Criteria 19: Run your spring boot project as java application</p> <p>Performance Criteria 20: Test REST API by accessing your HTTP GET method</p>
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Assessors Judgment Guide

(to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: Registration/Roll Number: Candidate Signature:.....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration			✓				
Knowledge Assessment	✓	✓					
Other Requirement							

Observation Checklist				
Assessment Task 1		Description of Assessment Task 1		
		Build and run spring boot project, as per instructions, after importing it to Eclipse IDE and compiled by Maven.		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Open Spring Initializer URL			
2.	Create java spring boot web application			
3.	Add "spring web" in dependency as instructed			
4.	Download created spring boot project			
5.	Extract the downloaded project			
6.	Launch the Eclipse IDE			
7.	Import the extracted spring boot project in Eclipse as "Existing Maven Project"			
8.	Perform Maven update and clean install commands on project.			
9.	Create new class and named it as per instruction			
10.	Add properties in the class as per instructions			
11.	Create setter and getter method for class properties			
12.	Create constructors for Class			
13.	Create spring boot REST Controller Class as per instructions			
14.	Add HTTP GET method in REST Controller as per instructions			
15.	Perform maven update command on spring boot project			
16.	Perform maven clean command on project using eclipse			
17.	Perform maven install command on project using eclipse			
18.	Compile project successfully using maven in Eclipse			
19.	Run your spring boot project as java application			
20.	Test REST API by accessing your HTTP GET method			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Knowledge Assessment

Title of Qualification: National Vocational Certificate Level 3 in Computer Networking and Cloud Computing (Jr. Programmer/Network Assistant)	CS Code:	Level: 3	Version: 01
Competency Standard Title: Create and Run Spring Boot Application	Assessment Date (DD/MM/YY): Assessment Time: 30 min		

Guidance for Candidate e	To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.
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Candidate Details	Name:..... Registration/Roll Number: Candidate Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: Assessor's code: Signature of the Assessor:

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)	
1. What is Maven and why it is used?	
2. Is Maven a framework?	
3. What are Restful APIs?	

Questions (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)

4. What is JSON format
Jackson library java?

5. What is Design
pattern (Singleton)?

ANSWER KEY

Sr.	Answers
1.	Maven is a build automation tool used primarily for Java projects. And it can also use to build and manage project in C#.
2.	Maven is a project management and comprehension tool that provides developers a complete build lifecycle framework.
3.	A REST API (also known as RESTful API) is an application programming interface (API or web API) that conforms to the constraints of REST architectural style and allows for interaction with RESTful web services.
4.	Jackson is a very popular and efficient java-based library to serialize or map java objects to JSON and vice versa.
5.	Singleton pattern is one of the simplest design patterns in Java.