

“SUMMER INTERNSHIP TRAINING REPORT”

Completed from TECHNO SAPIENS to a Six Week Course on

“Electricity Billing System – Java Programming”

**PRESENTED BY
SONU KUMAR
(3520210),CSE 4th YEAR**

Certificate

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An ISO 9001:2008 Certified Institution

 **TECHNO SAPIENS**

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Certificate

This Certificate is awarded to Mr./Miss./Mrs. SONU KUMAR
Son/daughter/wife of SH. THAKUR SINGH for having passed the final examination of
ADVANCED JAVA in grade 'A'
course attended from 15-JUL-2023 to 30-AUG-2023 at Kurukshetra Study Centre.

 Program Coordinator  Director

(S) Outstanding (100-90%) (A) Excellent (89-80%) (B) Very Good (79-70%) (C) Good (69-60%) (D) Satisfactory (59-50%)

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Course Overview:

A Java course typically covers a wide range of topics related to the Java programming language, which is a versatile and widely-used language in software development. Below is an overview of what you might expect to learn in a Java course:

- Define our Objectives
- Introduction to Java
- Java Basic
- Object-Oriented Programming (OOP)
- Exception Handling
- File I/O
- Database Connectivity
- Graphical User Interfaces (GUI)
- Web Development with Java



Technology Uses:

1. Java
2. Java Swing
3. Adv. Java (JDBC Connectivity)
4. MySQL
5. Apache NetBeans IDE 19
6. Command Prompt



What is Java?

Java is a high-level, versatile, and widely-used programming language that was first developed by James Gosling and his team at Sun Microsystems (which was later acquired by Oracle Corporation). It was released in 1995 and has since become one of the most popular programming languages in the world. Java is known for its platform independence, meaning that Java programs can run on different computer systems without modification, as long as they have a Java Virtual Machine (JVM) installed. Here are some key characteristics and features of Java:

1. Platform Independence: Java is often referred to as "write once, run anywhere" because Java code can be compiled into platform-independent bytecode. This bytecode can be executed on any device or platform with a compatible JVM.
2. Object-Oriented: Java is an object-oriented programming (OOP) language, which means it emphasizes the use of objects and classes to model and solve problems.



Java Swing

What is Java Swing?

Java Swing is a GUI (Graphical User Interface) toolkit and framework for Java, which is part of the Java Standard Library. It provides a set of components and tools for building desktop applications with rich, interactive graphical interfaces. Swing was introduced as a replacement for the earlier Abstract Window Toolkit (AWT) and is a more powerful and flexible option for creating graphical user interfaces in Java.

Here are some key points about Java Swing:

1. **Platform Independence:** Swing is built on top of AWT but provides platform-independent components, which means that Swing applications look and behave consistently across different operating systems.
2. **Lightweight Components:** Swing components are lightweight, meaning they do not rely on the underlying operating system's GUI components. Instead, they are drawn directly by Java. This results in consistent appearance and behavior.



Adv. Java(JDBC Connectivity)

What is Adv. Java(JDBC Connectivity)?

Advanced Java, particularly when it comes to JDBC (Java Database Connectivity), is a set of concepts and technologies used for connecting Java applications to relational databases. JDBC is an essential part of developing database-driven applications in Java. Here are the key aspects of Advanced Java with a focus on JDBC connectivity:

JDBC Overview:

1. JDBC is a Java-based API for connecting and interacting with relational databases, such as MySQL, Oracle, PostgreSQL, and more.
2. Database Connections:
3. Connecting to a database using JDBC involves creating a connection object that establishes a connection to the database server.



MySQL

What is MySQL?

MySQL is an open-source relational database management system (RDBMS) that is widely used for managing and organizing structured data. Developed by MySQL AB (now owned by Oracle Corporation), MySQL is known for its speed, reliability, and ease of use. It is one of the most popular RDBMS systems and is commonly used in web applications, data-driven software, and various other types of projects. Here are some key features and concepts related to MySQL:

1. **Relational Database:** MySQL is a relational database system, which means it organizes data into tables with rows and columns. The relationships between tables are defined using keys and foreign keys.
2. **SQL (Structured Query Language):** MySQL uses SQL for querying and manipulating data. Users can create, retrieve, update, and delete data using SQL statements.



Apache NetBeans IDE 19

What is Apache NetBeans IDE 19?

As of my last knowledge update in January 2022, Apache NetBeans IDE 12 was the latest version of the Apache NetBeans IDE. The version numbers may have changed since then, and new versions may have been released. However, I can provide information about Apache NetBeans IDE in general.

Apache NetBeans is a popular open-source Integrated Development Environment (IDE) for Java, JavaScript, PHP, and other programming languages. It offers a range of features to support software development, including:

1. **Multi-Language Support:** NetBeans provides support for a variety of programming languages, making it suitable for a broad range of projects. Java is particularly well-supported, given NetBeans' history as a Java IDE.
2. **Integrated Debugger:** It includes a powerful debugger that helps you identify and fix issues in your code.

What is Command Prompt?

The Command Prompt is a command-line interpreter application available in various Windows operating systems. It provides a text-based interface for users to interact with the operating system by entering text commands. The Command Prompt is also sometimes referred to as the "Windows Command Prompt" or "CMD."

Here are some key aspects and functionalities of the Windows Command Prompt:

1. **Accessing the Command Prompt:** To open the Command Prompt, you can press the Windows key + R, type "cmd" or "cmd.exe" and press Enter, or search for "Command Prompt" in the Start menu.
2. **Command Line Interface (CLI):** The Command Prompt provides a text-based command-line interface where users can enter commands to perform various tasks, such as file manipulation, system configuration, and more.

Project:

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The image shows a screenshot of a web application window titled "Login Page". The window has a standard Windows-style title bar with minimize, maximize, and close buttons. On the left side of the window, there is a large black silhouette of a person in a suit. To the right of the silhouette, there are three input fields: "Username", "Password", and "Logging in as". The "Logging in as" field is a dropdown menu currently showing "Admin". Below these fields are four buttons: "Login" (with a yellow key icon), "Cancel" (with a red X icon), "Signup" (with a document icon), and "Forgot Password" (with a blue padlock icon).

Login Page

Username

Password

Logging in as

Login Page

Signup page:

Create-Account


Username :

Password :

Security Question :

Answer :

Create Admin As :



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Forgot Password page:

Username

Your Security Question

Answer

Password



[Master](#) [Utility](#) [About](#) [Logout](#)



Admin home page:



New Customer

Customer Name	<input type="text"/>
Meter No	673692
Address	<input type="text"/>
City	<input type="text"/>
State	<input type="text"/>
Email	<input type="text"/>
Phone Number	<input type="text"/>

New Customer page

MeterInfo Page

Meter Information

Meter Number 904764

Meter Location Inside

Meter Type Electric Meter


Phase Code 011

Bill Type Normal

Days 30

Note: By default Bill is calculated for 30 days only

Submit **Cancel**



New meter info page

TAX DETAILS



Cost Per Unit

9

Meter Rent

47

Service Charge

22

Service Tax

57

Swacch_Bharat_Cess

6

GST


18

Submit

Cancel

Tax Details Page

Calculate Bill page:



Calculate Electricity Bill

Meter No

Name

Address

Units Cosumed

Month

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UPDATE CUSTOMER DETAILS

Update customer details
page:

Name :

Meter Number :

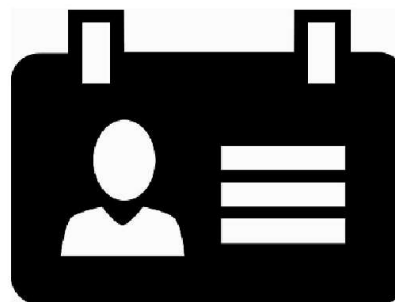
Address :

City :

State :

Email :

Phone :



VIEW CUSTOMER DETAILS

Name :	aki	State :	karnataka
Meter Number :	413098	Email :	aki@gmail.com
Address :	btm layout	Phone :	8989998888
City :	bangalore		

[Back](#)

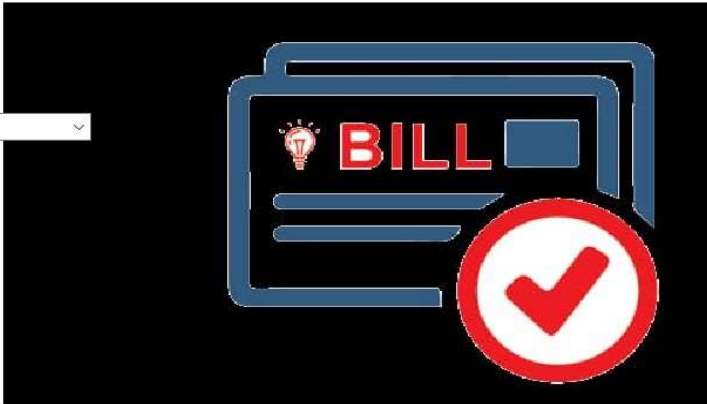
View Customer Detail spage

PayBill Page

Electricity Bill

Meter Number	413098
Name	aki
Month	January
Units	25
Total Bill	Rs 375
Status	Not Paid

[Pay](#) [Back](#)



Pay Bill page