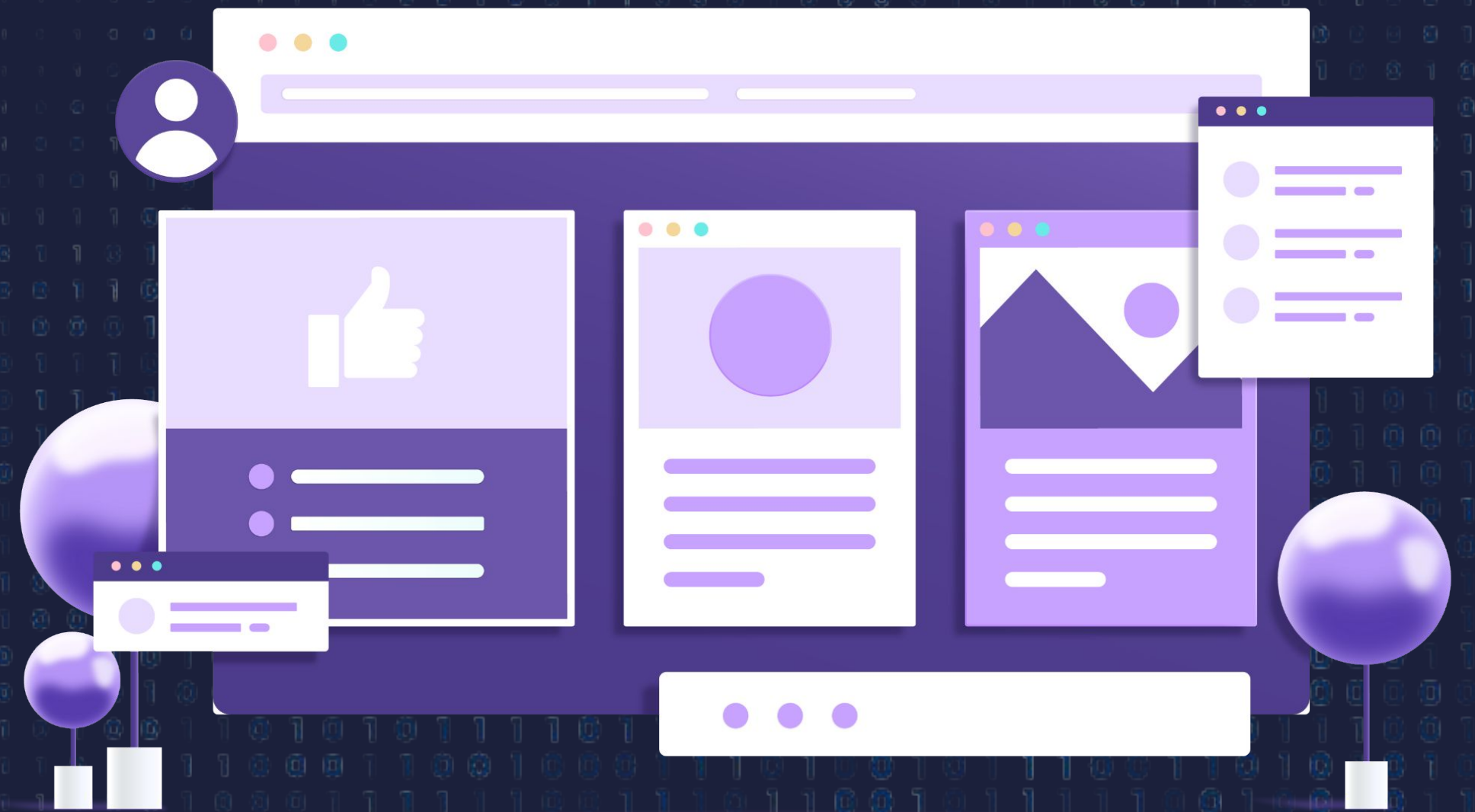PW SKILLS

Introduction to Java with DSA and System Design Course

Walkthrough the Java with DSA and System Design

Getting Started with Java Fundamental

1. Fundamentals of Computer
2. Fundamentals of Java Programming (Variables, data types, operators and Conditionals).
   - Main method in Java.
   - Loops & Logic building with pattern programmings and Java Objects and Methods
   - Array in Java.
   - Strings in Java.

Core Java

- Constructor
- Static keyword.
- Encapsulation
- Inheritance
- Polymorphism
- Abstraction.
- Interface

Advanced Java Concept

- Exception Handling
- MultiThreading
- Collection FrameWork
- Map API in java
- Lambda Expression
- Generic And Annotation
- Stream API
- File Handling
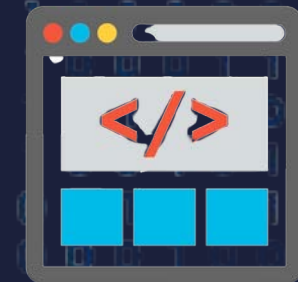
```java
import java.util.*;
public class homework1
{
    public static void main(String[]Args){
        Scanner hm =new Scanner(System.in);
        System.out.println("Enter Number 1");
        String first=hm.nextLine();
        int number1=Integer.parseInt(first);
        System.out.println("Enter Number 2");
        String last=hm.nextLine();
        int number2=Integer.parseInt(last);
        System.out.println("Result :" +(number1*number2));

    }
}
```

homework1.java
/storage/emulated/0/AppProjects/HomeWork/src

Version Control Systems (VCSs)

- Introduction to version control systems (Git)
- Introduction to GitHub
- Git Architecture
- Basic Git Commands
- Git EcoSystem
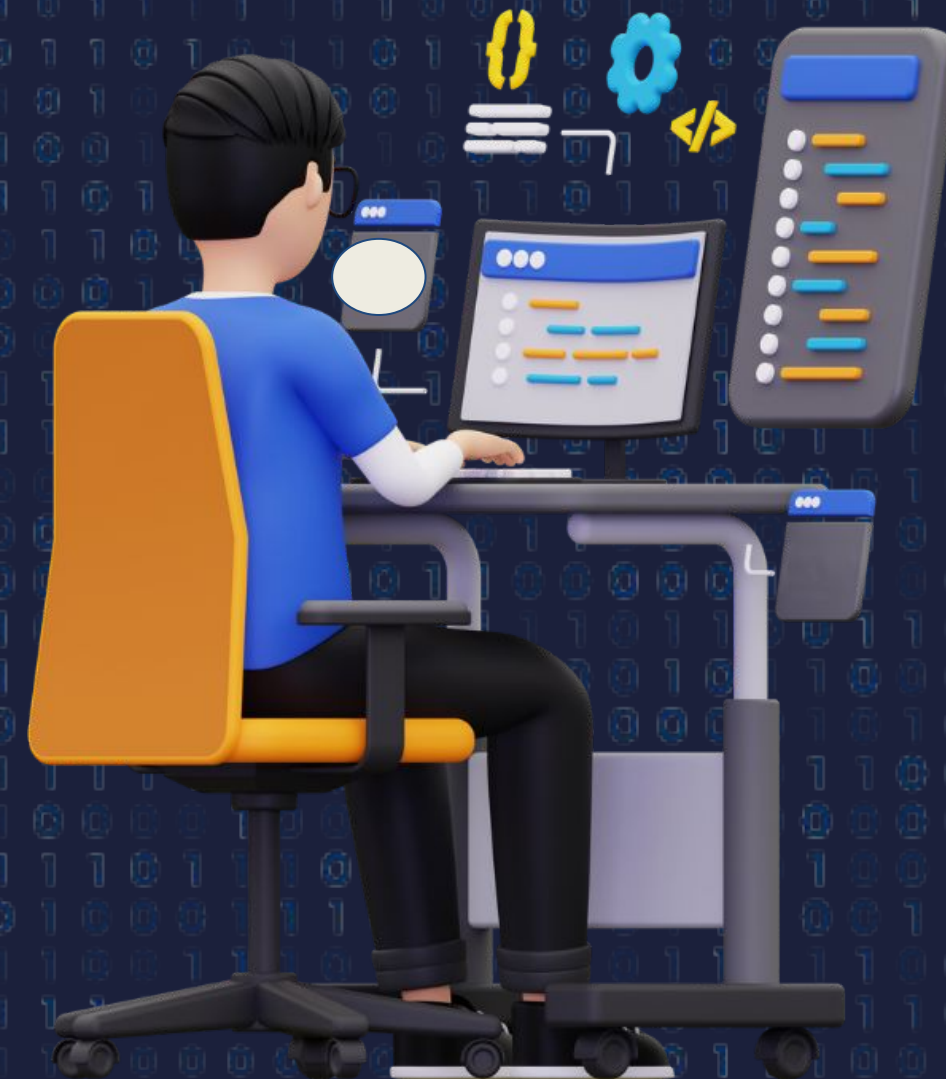- Git Branch

PW SKILLS

Concept In DSA(Data Structure and Algorithms)

- Complexity Analysis and Array
- Recursion
- Sorting,Searching and Bit Manipulation
- BackTracking
- Linked List
- HashMap,Stack and Queue
- Divide and Conquer, Greedy Approach
- Tree
- Binary Search Tree
- Priority Queue
- Graph
- Dynamic Programming

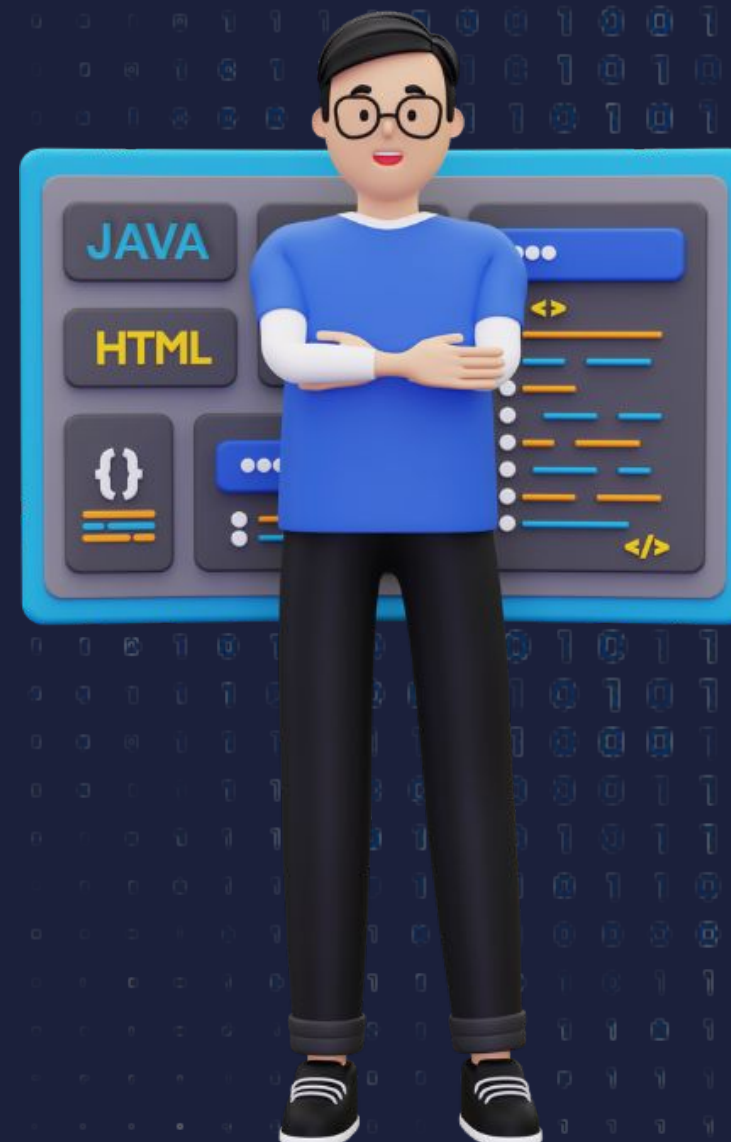# System Design

1. Design Principles.
2. System Design.

Walkthrough with the Application Development

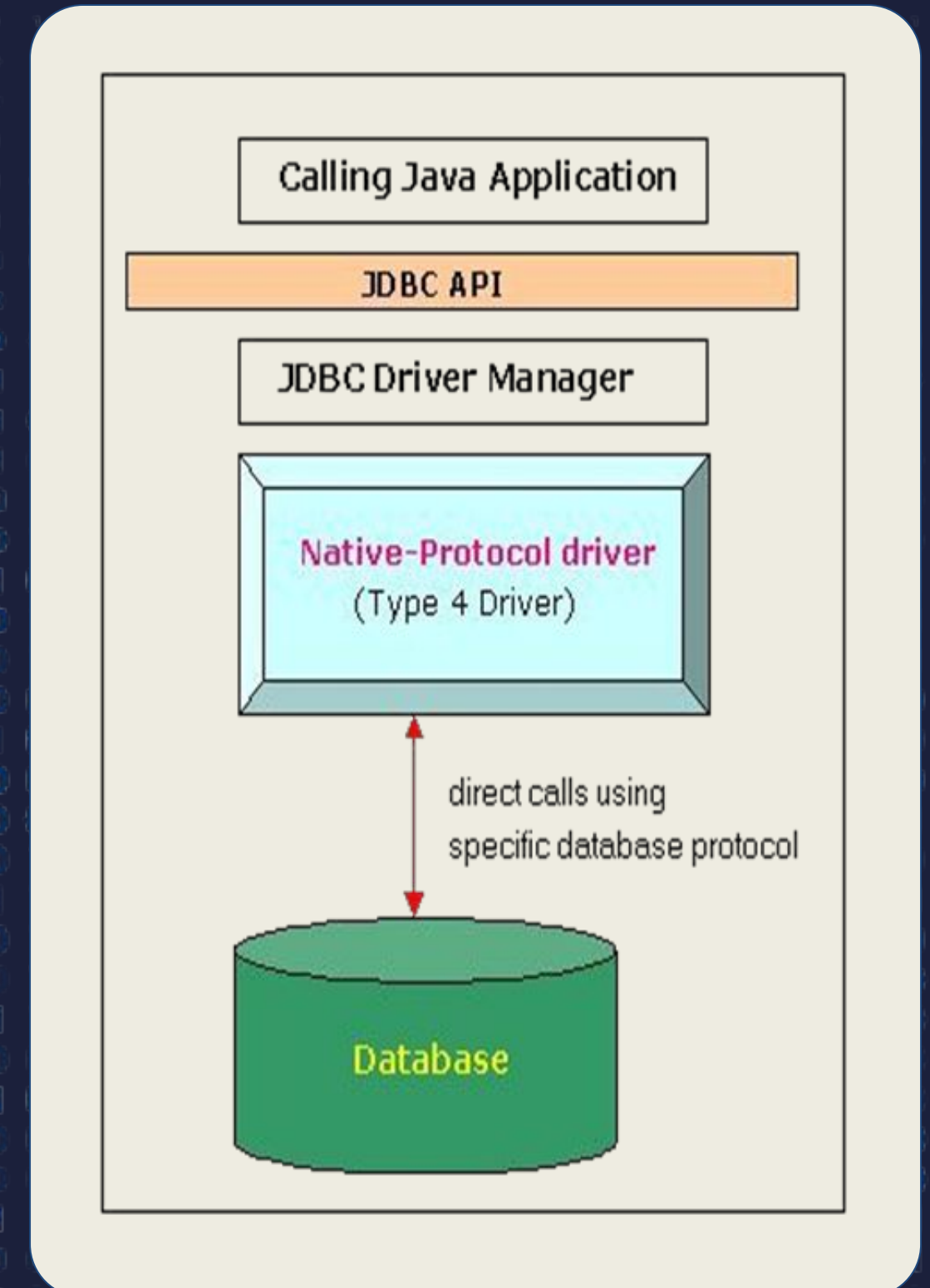# Database Concepts
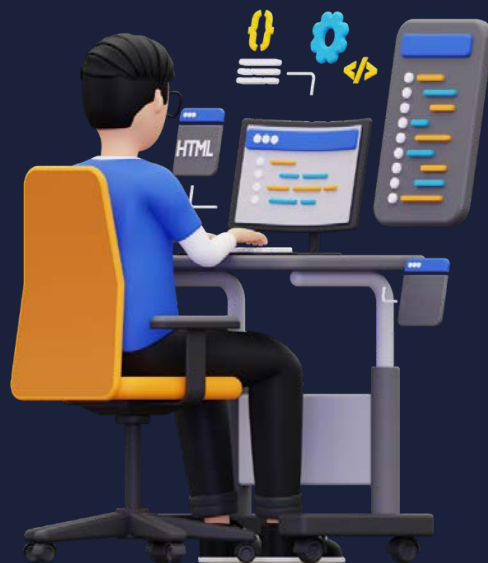
- SQL(MySQL)

- NoSQL(MongoDB)

JDBC

- Introduction to JDBC
- Steps Involved in JDBC.
- CRUD Operation in JDBC.

Servlets

- Client Server Architecture
- Servlet life cycle
- Servlet Application with MVC Design Pattern

Application Development using Framework

- Hibernate Features

- Hibernate Architecture

- Connection Pooling in Hibernate

- Caching in hibernate

- Spring fundamentals

- Spring Boot

- Spring Data JPA

- Spring REST

Project Development

PW SKILLS

THANK YOU

PW SKILLS