

**A
PROJECT REPORT
ON
SMART BANKING**

In partial fulfillment of requirements for the degree of

**Bachelor of Technology
in
Computer Science and Engineering**

Submitted By

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Introduction

Application to demonstrate Object Oriented programming concepts of Java Programming language including Inheritance, Abstract Classes, Abstract Methods, Overriding, and Polymorphism with Android application for the sake of learning programming. It also includes aggregation relationships represented through a Bank class that will manage the Bank Accounts.

Inheritance: Is-a Relationship

Is-a relationship indicates that A class Is a subclass of another class. Is-a relationship promotes code reuse which is the basic advantage of Object Oriented Programming.

For example A Person is a base class, and A Student is a subclass. Now the student is a Person also. Polymorphism provides another advantage where child classes can override the base class methods and provide their own functionality. Abstract classes cannot be instantiated. Abstract methods must be overridden in child classes. Overridden methods called for polymorphism.

Implementation

1. BankAccount abstract class - Fields balance, account number
2. CheckingAccount class-a subclass that includes transaction fees on the withdrawal transaction.
- 3- Savings Account class - a subclass of Account class. Yearly Interest Rate for profit.
- 4 Bank class-Aggregates the Accounts and Manages them.
6. UI-Will be implemented using Constraint Layout.

Technology and Tools

1. **Android Studio:** Android Studio is the official integrated development environment (IDE) for Android app development. It provides tools for writing, testing, and debugging Android applications.
2. **Java:** Java is the primary programming language used for Android app development. It provides a robust and scalable foundation for building secure and reliable banking applications.
3. **User Interface (UI) Design:** Android Studio offers various tools and resources to create a visually appealing and user-friendly UI for the banking application. You can use XML and Android Layouts to define the structure and appearance of different screens.

User Manuals

