

# Week – 4 Report

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**Domain: Core Java**

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**Week Ending: 04**

## **Exploring Interfaces in Java:**

During Week 4, I delved into the concept of interfaces in Java. Interfaces provided a way to define a contract for classes, specifying the methods they must implement. By understanding interfaces, I gained insight into how they facilitate abstraction, modularity, and polymorphism in Java programming. This knowledge was instrumental in designing and implementing the transfer functionality in the information banking system.

## **Understanding Abstract Classes:**

In addition to interfaces, I also learned about abstract classes. Abstract classes served as blueprints for other classes and provided a way to define common behavior and characteristics. By leveraging abstract classes, I could implement shared functionality among different account types in the banking system. This understanding allowed for more organized and maintainable code.

## **Method Overloading for Enhanced Functionality:**

Another valuable concept I explored in Week 4 was the method of overloading. Method overloading enabled me to define multiple methods with the same name but different parameter lists. This feature provided enhanced flexibility and convenience when implementing various transaction operations within the banking system. By utilizing the method overloading, I ensured a seamless user experience and code readability.

Implementing Transfer Functionality:

During this week, I successfully implemented the transfer functionality within the banking information system. Users were able to transfer funds from their accounts to other designated accounts. The transfer feature included validation of the destination account and appropriate updates to the account balances and transaction histories of both accounts involved. By adhering to robust validation and error-handling mechanisms, I ensured the accuracy and security of fund transfers.

### **Implementing Transaction History Feature:**

In addition to transfers, I also implemented the transaction history feature. Users could now view their account statements, which displayed detailed information such as timestamps, transaction types (deposit, withdrawal, transfer), and transaction amounts. The transaction history feature provided users with a comprehensive overview of their financial activities, enhancing transparency and accountability.

Week 4 presented valuable learning opportunities, including the exploration of interfaces, abstract classes, and overloading methods in Java. Furthermore, the successful implementation of the transfer functionality and transaction history feature brought the banking information system one step closer to a comprehensive and user-friendly solution. Also, the quiz has helped me in revising the concepts that I've learnt so far. These achievements solidified my understanding of key concepts and underscored the importance of designing a reliable and feature-rich banking system.