

Collection:

1. Create an abstract class **Medicine** to represent a drug manufactured by a pharmaceutical company with attributes price and expiry date and a method **getDetails()** to print them.
 - Also include an abstract function **displayLabel()** in the **Medicine** class.
 - Derive **Tablet, Syrup and Ointment** classes from the **Medicine** class. Override the **displayLabel()** function in each of these classes to print additional information suitable to the type of medicine. For example, in case of tablets, it could be “store in a cool dry place”, in case of ointments it could be “for external use only” etc.
 - Create a class **TestMedicine** with the main method that declares an array of **Medicine** references
 - Check the polymorphic behavior of the **displayLabel()** method.

2. WAP to store details for employees of ABC corp.

Emp info to be stored is : id, name, ph-no, emailed, dept, designation, date of joining. Employee class is abstract with 2 methods:

- **displayEmpDetails()** which is concrete implementation
- **calulateSalary()** which is abstract

Employees are of three types: **SalariedEmp**(basic-salary) , **SalesEmp** (monthly-sales) and **ContractEmp** (hrs, rate-per-hour).

- Calculate salary of **SalariedEmp** as follows:
DA = 20% of Basic_Pay
HRA = 10% of Basic_Pay
Salary = Basic_Pay + DA + HRA
- Calculate salary of **contractEmp** as hours worked * rate per hour
- Calculate salary of **Sales Emp** as 10% of monthly-sales

Create an array of different types of employees. Iterate thru the array and display **employeeedetails** as well as salary for each employee.

3. Create a class **Account** (account-id, name, type, balance, creation-date)

Create an **AccountManager** class that has the following menu:

1. Add new Account
2. Close account
3. Withdraw amount
4. Deposit amount
5. Check balance
6. Exit

Based on selected menu option, use **AccountDao** class to perform the relevant operations.

Create a **AccountDaoIntf** interface that has methods mentioned below.

AccountDao class will implement this interface and has following:

- `ArrayList<Account> accountlist;`

Methods (populate a few records in this class using constructor):

- `addAccount(Account a)`
- `closeAccount(Account a)`

- debitAccount(Account a, double amount) – while debiting from account, check if min balance of 5000 is maintained, else raise InsufficientFundsException
- creditAccount(Account a, double amt)
- showBalance(int acct-id)

4. Design an application for tracking the customer details.

Create a java class Customer (custId, custName, contactNo, address, dob)

Write a java class CustomerDAO with a LinkedList of customers

Perform following operations on Customer class. Write separate method for each functionality.

- void insert(Customer c) : the record of a new Customer.
- void update(id, newContactNo) : the contact number of a customer based on customer id.
- void delete(id) : the customer record by taking the customer id.
- void displayAll() : retrieve all customer details.
- void displayCustomerById(int id)

Write a Java class CustCRUDManager with below menu based application to do following operations –

- Insert new Customer details.
- Update the customer details.
- Delete the customer record.
- Display all customer details.
- Exit from the menu and terminate the program.