**OOPS\_ADVANCE\_TASK**

**Exercise-1:**

class Account{  
  
  double bal,Total;  
  public long accNum;  
  double balance;  
  String accHolderName;  
  public Account() {  
  
  }  
  public Account(long accNum, double balance, String accHolderName) {  
    this.accNum = accNum;  
    this.balance = balance;  
    this.accHolderName = accHolderName;  
  }  
  public long getAccountNumber()  
  {  
    return accNum;  
  }  
  public void setAccountNumber(long accNum)  
  {  
    this.accNum=accNum;  
  }  
  public double getBalance() {  
    return balance;  
  }  
  public void setBalance(double balance) {  
    this.balance = balance;  
  }  
  public String getAccHolderName() {  
    return accHolderName;  
  }  
  public void setAccHolderName(String accHolderName) {  
    this.accHolderName = accHolderName;  
  }  
  
  public void deposit(double amount)  
  {  
    balance+=amount;  
  }  
  public void withdraw(double amount)  
  {  
    bal=balance;  
    Total+=amount;  
    bal=bal-amount;  
    if(bal<=500)  
    {  
      System.out.println("Cannont Withdrawal the amount");  
      return;  
    }  
    balance-=amount;  
  }  
  
  
}

public class Person extends Account{  
  
  
  public Person(long accNum, double balance, String accHolderName) {  
    super(accNum, balance, accHolderName);  
  }  
  private String name;  
  private byte age;  
  
  
  public String getName() {  
    return name;  
  }  
  public void setName(String name) {  
    this.name = name;  
  }  
  public byte getAge() {  
    return age;  
  }  
  public void setAge(byte age) {  
    this.age = age;  
  }  
  
public static void main(String[] args) {  
  
    Person smith=new Person(5433890456l,2000,"smith");  
    Person kathy=new Person(34567887621l,3000,"kathy");  
    smith.deposit(2000);  
    kathy.withdraw(2000);  
//    Savings\_Account savings = new Savings\_Account(5433890456l,200,"smith");  
  
    System.out.println(smith.getAccHolderName()+": "+smith.getBalance());  
    System.out.println(kathy.getAccHolderName()+": "+kathy.getBalance());  
  }  
}

class Savings\_Account extends Account{  
  
  final double minimum\_Balance=500;  
  
  @Override  
  public void withdraw(double amount)  
  {  
    if(balance<=minimum\_Balance)  
    {  
      System.out.println("Cannont Withdrawal the amount");  
      return;  
    }  
  }  
}

class CurrentAccount extends Account{  
  
  double overdraft = 5000;  
  public void withdraw(double amount)  
  {  
    if(Total>overdraft)  
    {  
      System.out.println("True");  
      return;  
    }  
    else {  
      System.out.println("False");  
    }  
  }  
}

**Exercise-2:**

**package** com.cts.advance;

**abstract** **class** Item {

**private** **int** identificationNumber;

**private** String title;

**private** **int** noOfCopies;

**public** Item() {

System.***out***.println("Default Constructor Called!!");

}

**public** Item(**int** identificationNumber, String title, **int** noOfCopies) {

**this**.identificationNumber = identificationNumber;

**this**.title = title;

**this**.noOfCopies = noOfCopies;

}

**public** **int** getIdentNum() {

**return** identificationNumber;

}

**public** **void** setIdentNum(**int** num) {

**this**.identificationNumber = num;

}

**public** String getTitle() {

**return** title;

}

**public** **void** setTitle(String title) {

**this**.title = title;

}

**public** **int** getNoOfCopies() {

**return** noOfCopies;

}

**public** **void** setNumberOfCopies(**int** numberOfCopies) {

**this**.noOfCopies = numberOfCopies;

}

**public** **abstract** **void** equals();

**public** String toString() {

**return** "Item{" + "identificationNumber=" + identificationNumber + ", title='" + title + '\'' + ", numberOfCopies=" + noOfCopies + '}';

}

**public** **void** checkIn() {

noOfCopies++;

}

**public** **void** checkOut() {

**if**(noOfCopies>0)

**this**.noOfCopies--;

}

**public** **void** addItem(**int** count) {

**this**.noOfCopies+=count;

}

}

**abstract** **class** WrittenItem **extends** Item{

**private** String author;

**public** WrittenItem() {

System.***out***.println("Default Constructor of WrittenItem Class");

}

**public** WrittenItem(String author) {

**this**.author=author;

}

**public** String getAuthor() {

**return** author;

}

**public** **void** setAuthor(String name) {

**this**.author=name;

}

}

**class** Book **extends** WrittenItem{

**public** Book() {

System.***out***.println("Default Constructor of Book class");

}

@Override

**public** **void** equals() {

// **TODO** Auto-generated method stub

}

}

**class** JournalPaper **extends** WrittenItem{

**private** **int** yearPublished;

**public** JournalPaper() {

System.***out***.println("default constructor of journalPaper class");

}

**public** JournalPaper(**int** yearPublished) {

**this**.yearPublished=yearPublished;

}

**public** **int** getYearOfPublish() {

**return** yearPublished;

}

**public** **void** setYear(**int** year) {

**this**.yearPublished=year;

}

@Override

**public** **void** equals() {

// **TODO** Auto-generated method stub

}

}

**abstract** **class** MediaItem **extends** Item{

**private** **int** runtime;

**public** MediaItem() {

System.***out***.println("Default Constructor of MediaItem");

}

**public** MediaItem(**int** runtime) {

**this**.runtime=runtime;

}

**public** **int** getRunTime() {

**return** runtime;

}

**public** **void** setRunTime(**int** runtime) {

**this**.runtime=runtime;

}

**public** **void** print() {

System.***out***.println("This is a MediaItem object and Its Run time is"+runtime);

}

}

**class** Video **extends** MediaItem{

**private** String director;

**private** String genre;

**private** **int** yearReleased;

**public** Video(String director,String genre,**int** yearReleased) {

**this**.director=director;

**this**.genre=genre;

**this**.yearReleased=yearReleased;

// **TODO** Auto-generated constructor stub

}

**public** String GetDirector() {

**return** director;

}

**public** **void** setDirector(String director) {

**this**.director=director;

}

**public** String getGenre() {

**return** genre;

}

**public** **void** setGenre(String genre) {

**this**.genre=genre;

}

**public** **int** getYearRelease() {

**return** yearReleased;

}

**public** **void** setYearRelease(**int** year) {

**this**.yearReleased=year;

}

@Override

**public** **void** print() {

System.***out***.println("The Director of this Video is "+director+"The genre of this is "+genre+" and it got released in "+yearReleased);

}

@Override

**public** **void** equals() {

// **TODO** Auto-generated method stub

}

}

**class** CD **extends** MediaItem{

**private** String artist;

**private** String genre;

**public** CD(String artist,String genre) {

**this**.artist=artist;

**this**.genre=genre;

}

**public** String getGenre() {

**return** genre;

}

**public** **void** setGenre(String genre) {

**this**.genre=genre;

}

**public** String getArrist() {

**return** artist;

}

**public** **void** setArtist(String artist) {

**this**.artist=artist;

}

**public** **void** print() {

System.***out***.println("The Artist is: "+artist+" and the genre of this CD is "+genre);

}

@Override

**public** **void** equals() {

// **TODO** Auto-generated method stub

}

}

**public** **class** Exercise\_2 {

**public** **static** **void** main(String[] args) {

// **TODO** Auto-generated method stub

Video video=**new** Video("Rajamouli", "Period-Drama", 2015);

video.print();

video.toString();

CD cd=**new** CD("Arijit Singh", "Romantic-Songs");

cd.print();

}

}