Assignment-9

class BankAccount {//it is the parent class or super  class

    constructor(owner, balance) {

        this.owner = owner;// this refers the current object (i.e variable)

        this.balance = balance;

    }

    deposit(amount) { //deposit method with parameter name as amount

        if (amount > 0) {

            this.balance += amount;

            console.log(`Deposited ${amount} Rs. New balance: ${this.balance} Rs`);// it prints the deposited amount and new balance after deposit

        } else {

            console.log("Invalid Amount to Deposit . Please deposit Valid amount.");

        }

    }

    withdraw(amount) {  //withdrawl method with parameter name as amount

        if (amount > 0 && amount <= this.balance) {

            this.balance -= amount;//It is the deduction of amount in balance

            console.log(`Withdraw ${amount} Rs. New balance: ${this.balance} Rs Parent`);// it prints the withdrawl amount and new balance after withdrawl

        } else {

            console.log("Insufficient funds or Low balance in your Account");

        }

    }

}

class SavingsAccount extends BankAccount {//child class is accessing properities from parent class by using extends keyword

    constructor(owner, balance, interestRate) {

        super(owner, balance);//it will go to the parent class checks with parameters

        this.interestRate = interestRate;

    }

    addInterest() {//this is the method

        const interestAmount = this.balance \* (this.interestRate / 100);

        this.balance += interestAmount;

        console.log(`Added interest: ${interestAmount} Rs. New balance: ${this.balance} Rs`);//after the calling this method it will print the updated interest method

    }

}

/\*checkingaccount is also child class it is also accessing peoperities from parent

  !important : when you see the both withraw methods with same name and same parameters from parent and child classes compiler will choose child only because child is accessing properities so compiler gives priority to child only this is called overriding\*/

class CheckingAccount extends BankAccount {

    constructor(owner, balance, overdraft) {

        super(owner, balance);//it will go to the parent class checks with parameters

        this.overdraft = overdraft;

    }

    withdraw(amount) {

        if (amount <= this.balance + this.overdraft) {

            this.balance -= amount;

            console.log(`Withdraw ${amount} Rs. New balance: ${this.balance} Rs Child `);

        } else {

            console.log("Withdrawal amount exceeds available balance and overdraft limit. ");

        }

    }

}

// Test the  BankAccount

console.log("BankAccount:");

const account1 = new BankAccount("Bhanu Prasad", 1000);// creating the object of parent class, address of the class will stored in the account1 variable

account1.deposit(500);//by using object reference we are passing the parameter through method

account1.withdraw(200);

// Test the  SavingsAccount

console.log("SavingsAccount:");

const savingsAccount = new SavingsAccount("Harish", 2000, 5);

savingsAccount.deposit(1000);

savingsAccount.addInterest();

// Test the CheckingAccount

console.log("CheckingAccount:");

const checkingAccount = new CheckingAccount("Venkat", 500, 1000);

checkingAccount.deposit(200);

checkingAccount.withdraw(700);