/////////Lighting the way//////////

**public** **class** LightHouse {

**private** String location;

**private** **int** height;

**private** String lightType;

**private** **int** hours;

**public** String getLocation() {

**return** location;

}

**public** **void** setLocation(String location) {

**this**.location = location;

}

**public** **int** getHeight() {

**return** height;

}

**public** **void** setHeight(**int** height) {

**this**.height = height;

}

**public** String getLightType() {

**return** lightType;

}

**public** **void** setLightType(String lightType) {

**this**.lightType = lightType;

}

**public** **int** getHours() {

**return** hours;

}

**public** **void** setHours(**int** hours) {

**this**.hours = hours;

}

**public** LightHouse(String location, **int** height, String lightType, **int** hours) {

**this**.location = location;

**this**.height = height;

**this**.lightType = lightType;

**this**.hours = hours;

}

**public** **int** calculateFlashesForGivenHours() {

**if**(hours>0 && height>0) {

**return** (hours\*60\*60)/72;

}

**else** {

System.***out***.println("Invalid light house details");

**return** -1;

}

}

}

**import** java.util.Scanner;

**public** **class** UserInterface {

**public** **static** LightHouse extractDetails(String lightHouseDetails) {

String[] details = lightHouseDetails.split(":");

String location = details[0];

**int** height = Integer.*parseInt*(details[1]);

String lightType = details[2];

**int** hours = Integer.*parseInt*(details[3]);

**return** **new** LightHouse(location,height,lightType,hours);

}

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

Scanner scanner = **new** Scanner(System.***in***);

System.***out***.println("Enter the details");

String details = scanner.nextLine();

LightHouse lightHouse = *extractDetails*(details);

**int** flashes = lightHouse.calculateFlashesForGivenHours();

**if** (flashes != -1) {

System.***out***.println("LightHouse Location: " + lightHouse.getLocation());

System.***out***.println("Height: " + lightHouse.getHeight());

System.***out***.println("Light Type: " + lightHouse.getLightType());

System.***out***.println("Hour: " + lightHouse.getHours());

System.***out***.println("Flashes: " + flashes);

}

scanner.close();

}

}

////////////Beyond the basic///////////

**public** **class** Insurance {

**private** String policyNumber;

**private** String insuranceProvider;

**private** **double** coverageAmount;

**private** String coverageType;

**private** **int** durationInYears;

**public** Insurance(String policyNumber, String insuranceProvider, **double** coverageAmount,

String coverageType, **int** durationInYears) {

**this**.policyNumber = policyNumber;

**this**.insuranceProvider = insuranceProvider;

**this**.coverageAmount = coverageAmount;

**this**.coverageType = coverageType;

**this**.durationInYears = durationInYears;

}

**public** String getPolicyNumber() {

**return** policyNumber;

}

**public** **void** setPolicyNumber(String policyNumber) {

**this**.policyNumber = policyNumber;

}

**public** String getInsuranceProvider() {

**return** insuranceProvider;

}

**public** **void** setInsuranceProvider(String insuranceProvider) {

**this**.insuranceProvider = insuranceProvider;

}

**public** **double** getCoverageAmount() {

**return** coverageAmount;

}

**public** **void** setCoverageAmount(**double** coverageAmount) {

**this**.coverageAmount = coverageAmount;

}

**public** String getCoverageType() {

**return** coverageType;

}

**public** **void** setCoverageType(String coverageType) {

**this**.coverageType = coverageType;

}

**public** **int** getDurationInYears() {

**return** durationInYears;

}

**public** **void** setDurationInYears(**int** durationInYears) {

**this**.durationInYears = durationInYears;

}

**public** **double** calculateMaturityAmount() {

**if**(coverageAmount <= 0 || durationInYears <= 0) {

System.***out***.println("Invalid details");

**return** -1;

}

**else** {

**double** maturityAmount = coverageAmount;

**for**(**int** i=0;i<durationInYears;i++) {

maturityAmount += maturityAmount\*0.05;

}

**return** maturityAmount;

}

}

}

**import** java.util.Scanner;

**public** **class** UserInterface {

**public** **static** Insurance extractDetails(String insuranceDetails) {

String[] parts = insuranceDetails.split(":");

String policyNumber = parts[0];

String insuranceProvider = parts[1];

**double** coverageAmount = Double.*parseDouble*(parts[2]);

String coverageType = parts[3];

**int** durationInYears = Integer.*parseInt*(parts[4]);

**return** **new** Insurance(policyNumber, insuranceProvider, coverageAmount, coverageType, durationInYears);

}

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

Scanner scanner = **new** java.util.Scanner(System.***in***);

System.***out***.println("Enter the details");

String details = scanner.nextLine();

Insurance insurance = *extractDetails*(details);

**if** (insurance != **null**) {

System.***out***.println("Policy Number: " + insurance.getPolicyNumber());

System.***out***.println("Insurance Provider: " + insurance.getInsuranceProvider());

System.***out***.println("Coverage Amount: " + insurance.getCoverageAmount());

System.***out***.println("Coverage Type: " + insurance.getCoverageType());

System.***out***.println("Duration in years: " + insurance.getDurationInYears());

System.***out***.println("Maturity Amount: " + insurance.calculateMaturityAmount());

}

scanner.close();

}

}

/////////////////The phone zone///////////////////

**public** **class** MobileInfo {

**private** String mobileName;

**private** String imeiNumber;

**private** String mobileBrand;

**private** **double** mobilePrice;

**public** String getMobileName() {

**return** mobileName;

}

**public** **void** setMobileName(String mobileName) {

**this**.mobileName = mobileName;

}

**public** String getImeiNumber() {

**return** imeiNumber;

}

**public** **void** setImeiNumber(String imeiNumber) {

**this**.imeiNumber = imeiNumber;

}

**public** String getMobileBrand() {

**return** mobileBrand;

}

**public** **void** setMobileBrand(String mobileBrand) {

**this**.mobileBrand = mobileBrand;

}

**public** **double** getMobilePrice() {

**return** mobilePrice;

}

**public** **void** setMobilePrice(**double** mobilePrice) {

**this**.mobilePrice = mobilePrice;

}

**public** MobileInfo(String mobileName, String imeiNumber, String mobileBrand, **double** mobilePrice) {

**this**.mobileName = mobileName;

**this**.imeiNumber = imeiNumber;

**this**.mobileBrand = mobileBrand;

**this**.mobilePrice = mobilePrice;

}

**public** **double** calculateMobilePriceToBePaid() {

**int** amount =0;

**if**(mobilePrice <=0 || imeiNumber.length() !=15) {

**return** -1;

}

**else** {

**if**(mobileBrand.equals("Samsung")) {

**return** mobilePrice-(mobilePrice\*0.02);

}

**else** **if**(mobileBrand.equals("Realme")) {

**return** mobilePrice-(mobilePrice\*0.06);

}

**else** **if**(mobileBrand.equals("OnePlus")) {

**return** mobilePrice-(mobilePrice\*0.04);

}

**else** **if**(mobileBrand.equals("Oppo")) {

**return** mobilePrice-(mobilePrice\*0.05);

}

**else** **if**(mobileBrand.equals("Vivo")) {

**return** mobilePrice-(mobilePrice\*0.03);

}

**else** {

**return** -1;

}

}

}

}

**import** java.util.Scanner;

**public** **class** UserInterface {

**public** **static** MobileInfo extractDetails(String mobileDetails) {

String[] parts = mobileDetails.split(":");

String mobileName = parts[0];

String imeiNumber = parts[1];

String mobileBrand = parts[2];

**double** mobilePrice = Double.*parseDouble*(parts[3]);

**return** **new** MobileInfo(mobileName, imeiNumber, mobileBrand, mobilePrice);

}

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

Scanner scanner = **new** java.util.Scanner(System.***in***);

System.***out***.println("Enter the Mobile details");

String details = scanner.nextLine();

MobileInfo mobile = *extractDetails*(details);

**if** (mobile != **null**) {

**double** amountToBePaid = mobile.calculateMobilePriceToBePaid();

**if** (amountToBePaid != -1) {

System.***out***.println("Mobile Details");

System.***out***.println("Mobile Name: " + mobile.getMobileName());

System.***out***.println("Mobile IMEI Number: " + mobile.getImeiNumber());

System.***out***.println("Mobile Brand: " + mobile.getMobileBrand());

System.***out***.println("Mobile Price: " + mobile.getMobilePrice());

System.***out***.println("Amount to be paid: " + amountToBePaid);

} **else** {

System.***out***.println("Invalid Mobile details");

}

} **else** {

System.***out***.println("Invalid Mobile details");

}

scanner.close();

}

}