Using Java and the given project to develop a programe with the below requirements:

You have **main()** method and **menu()** in **Main.class** within this project already.

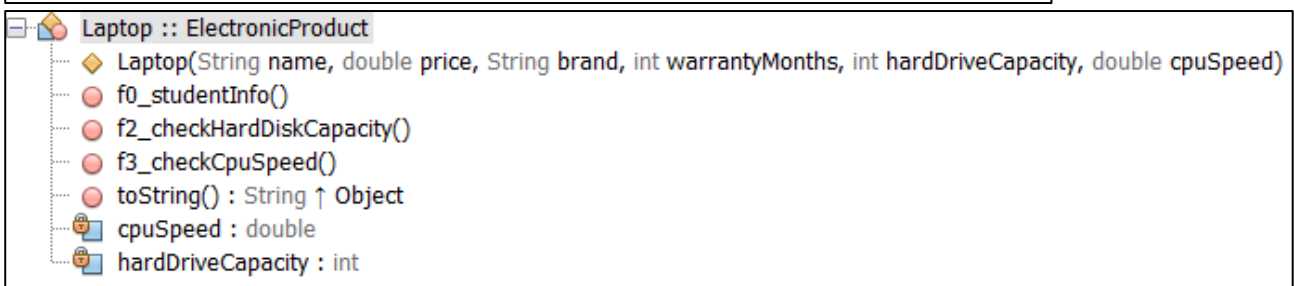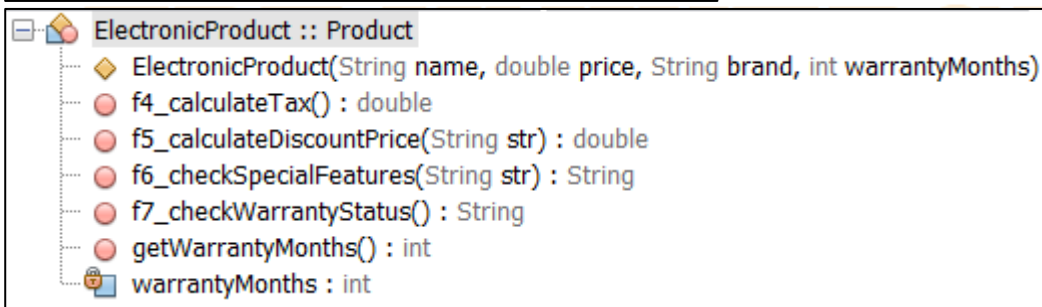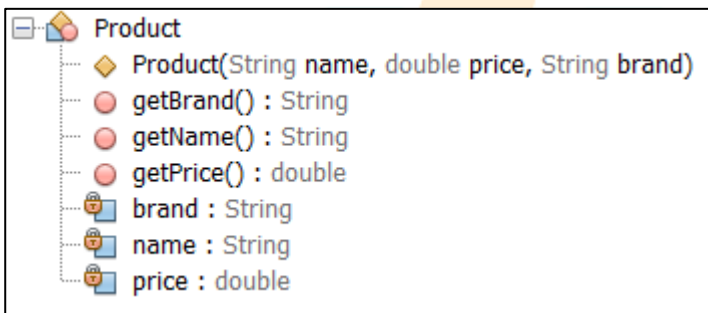- Design and code a class named **Product**:

Product	Where
-*name*: String -*price*: double -*brand*: String +Product(name:String, price:double, brand:String) +getName():String +getPrice():double +getBrand():String	• getName():String – return name. • getPrice():double – return price • getBrand():String – return brand

- Class **ElectronicProduct** extends **Product** including an attributes: *warrantyMonths*; its getters and setters; and its constructors as well as function members.

ElectronicProduct	Where
- *warrantyMonths:* int +ElectronicProduct(name:String, price:double, brand:String, warrantyMonths:int) + f4_calculateTax():double + f5_calculateDiscountPrice(String str):double + f6_checkSpecialFeatures(String str):String + f7_checkWarrantyStatus():String + getWarrantyMonths():int	• **f4_calculateTax**():double - tax = 0% if price <= 100; tax=10% if price<=500; otherwise tax=30% of price. • **f5_calculateDiscountPrice**(str:String): double - Discount 10% of price if last character of Brand as "given letter - str" • **f6_checkSpecialFeatures**(str:String):String – Check whether brand contain a character "str" or not (character is inputed from the keyboard): Return "Has special features" if brand contain "str" character; return "No special features" otherwise. • **f7_checkWarrantyStatus**():String – return "Warranty valid" if warrantyMonths > 0; return "Warranty expired" otherwise. • **getWarrantyMonths**():int – return months of warrenty

- Class **Laptop** extends **ElectronicProduct:** including some attributes *hardDriveCapacity*:int , *cpuSpeed*:double; and some methods:

Laptop	Where
- *hardDriveCapacity*:int*;* - *cpuSpeed*:double*;*	• **f0_studentInfo**():void – Return student info. Ex: He180001 – Vu Van Huy.
+ Laptop(name:String, price:double, brand:String, warrantyMonths:int, hardDriveCapacity:int, cpuSpeed:double) + f0_studentInfo():void +f2_checkHardDiskCapacity():void +f3_checkCpuSpeed():void toString():String	• **f2_checkHardDiskCapacity**():void – Return "Small capacity" if hardDriveCapacity <= 120; Return "Medium capacity" if hardDriveCapacity <= 240; Return "Medium capacity" otherwise. • **f3_checkCpuSpeed**():void – Return "High speed" if cpuSpeed>=2.5; Return "Low speed" otherwise. • **toString()**:String: Return string format.

```
Product
    Product(String name, double price, String brand)
    getBrand() : String
    getName() : String
    getPrice() : double
    brand : String
    name : String
    price : double

ElectronicProduct :: Product
    ElectronicProduct(String name, double price, String brand, int warrantyMonths)
    f4_calculateTax() : double
    f5_calculateDiscountPrice(String str) : double
    f6_checkSpecialFeatures(String str) : String
    f7_checkWarrantyStatus() : String
    getWarrantyMonths() : int
    warrantyMonths : int

Laptop :: ElectronicProduct
    Laptop(String name, double price, String brand, int warrantyMonths, int hardDriveCapacity, double cpuSpeed)
    f0_studentInfo()
    f2_checkHardDiskCapacity()
    f3_checkCpuSpeed()
    toString() : String ↑ Object
    cpuSpeed : double
    hardDriveCapacity : int
```

Test case:
Input Laptop infor:
1. Input Laptop name: Dell XPS 13
2. Input Laptop brand: Dell
3. Input months of warranty: 24
4. Input hard disk capacity: 512
5. Input CPU speed: 2.6
6. Input Laptop price: 400

Select 0: display student info

```
==> What is your choise? 0
He180001 - VU VAN HUY
BUILD SUCCESSFUL (total time:
```

Select 1: Display laptop info

```
Laptop: Dell X3 inspirion
price: 400.0
brand: Dell
warranty: 24
hard disk capacity: 512
CPU Speed: 2.6
BUILD SUCCESSFUL (total time: 0 seconds)
```

Select 2:

Input hard disk capacity: 512	Input hard disk capacity: 60
Output:	**Output:**
``` Large capacity BUILD SUCCESSFUL ```	``` Small capacity BUILD SUCCESSFUL ```

Select 3:

Input CPU speed: 2.6	Input CPU speed: 1.8
Output:	**Output:**
``` High speed BUILD SUCCESSFUL ```	``` Low speed BUILD SUCCESSFUL ```

Select 4:

Input Laptop price: 400.0	Input Laptop price: 1200.0
Output:	**Output:**
40.0 BUILD SUCCESSFUL	360.0 BUILD SUCCESSFUL

Select 5:

Input: l	Input: r
Output:	**Output:**
360.0 BUILD SUCCESSFUL	400.0 BUILD SUCCESSFUL

Select 6:

Input: e	Input: u
Output:	**Output:**
Has special features BUILD SUCCESSFUL (total	No special features BUILD SUCCESSFUL (total

Select 7:

Input months of warranty: 24	Input months of warranty: 0
Output:	**Output:**
Warranty valid BUILD SUCCESSFUL	Warranty expired BUILD SUCCESSFUL

Select 8: Quit