Section: B **Quiz 22** Roll number: BSE-23013

Q1 Demonstrate your understanding of the diamond problem by creating a UML diagram and coding it in C++. Your design will categorize electronic devices into computing, entertainment, and smart devices.

Class Structure:

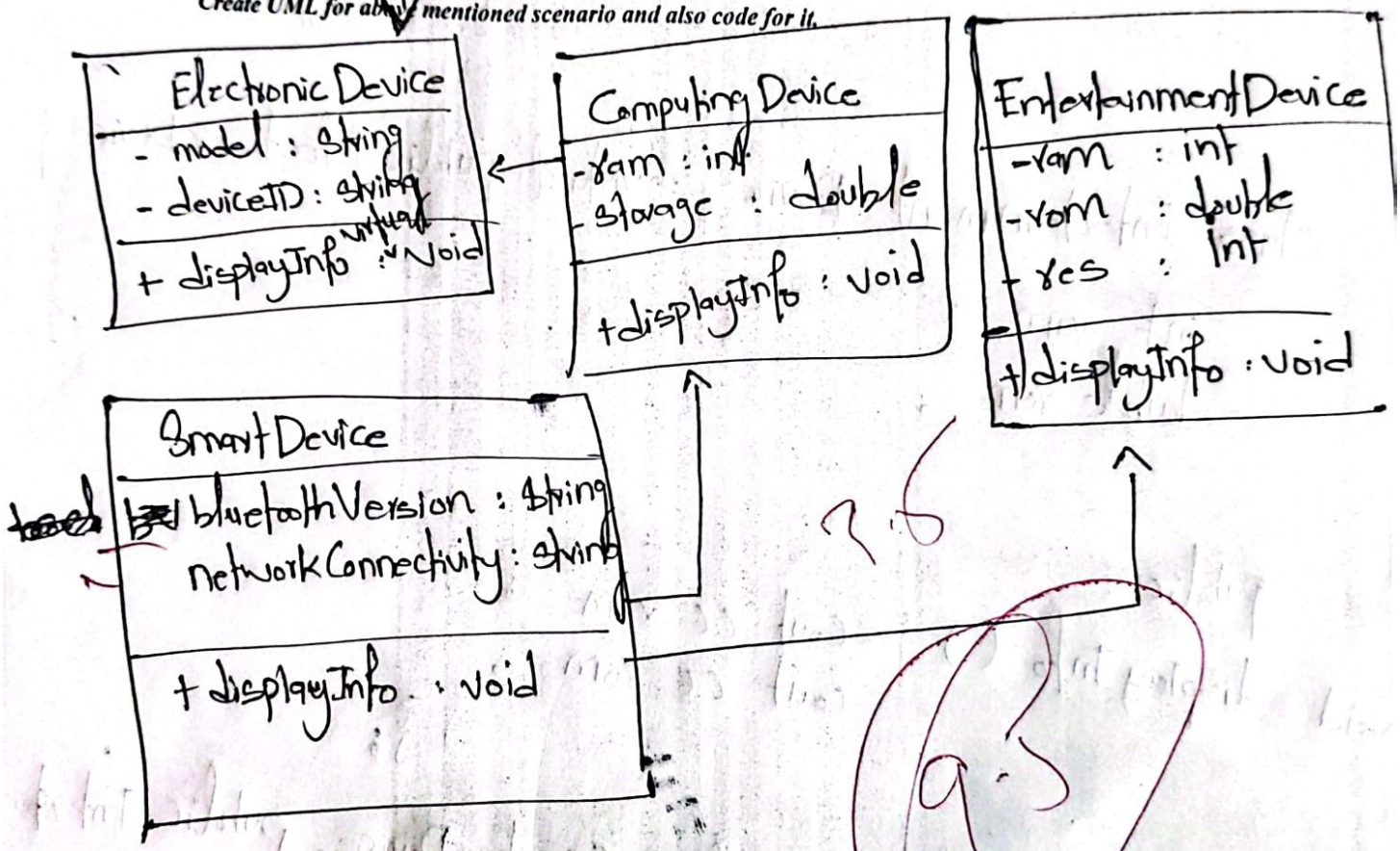
Base Class: ElectronicDevice

Subclasses: ComputingDevice, EntertainmentDevice

Final Class: SmartDevice

Electronic class have model and device id as attributes and a displayInfo method.
Computing Device class has ram and storage as attributes and displayInfo method.
Entertainment Device class has ram, rom and screen resolution as attributes and displayInfo method.
Smart Devices class have bluetooth-version and network connectivity as attributes and displayInfo method.

Create UML for above mentioned scenario and also code for it.




```
class ElectronicDevice {
string model ;
string deviceID ;
public:
virtual void displayInfo ( ){
Cout << model ;
Cout << deviceID ; } } ;
```

```
class ComputingDevice : virtual public ElectronicDevice {
    int ram;
    double storage;
public:
void displayInfo() {
        cout << ram;
        cout << storage;
    }
};

class EntertainmentDevice : virtual public ElectronicDevice {
    int ram;
    double rom;
public:
void displayInfo() { cout << ram;
                     cout << rom;
    }
};

class SmartDevice : public ComputingDevice, public EntertainmentDevice {
string bluetoothVersion;
string networkConnectivity;
public:
displayInfo() { cout << bluetoothVersion;
                cout << networkConnectivity; }
};
```