Question :

Suppose you are hired to develop a program for a rental house agent. The system is used to advertise all houses for rent. The rental houses include two types of houses: bungalow and apartment houses.
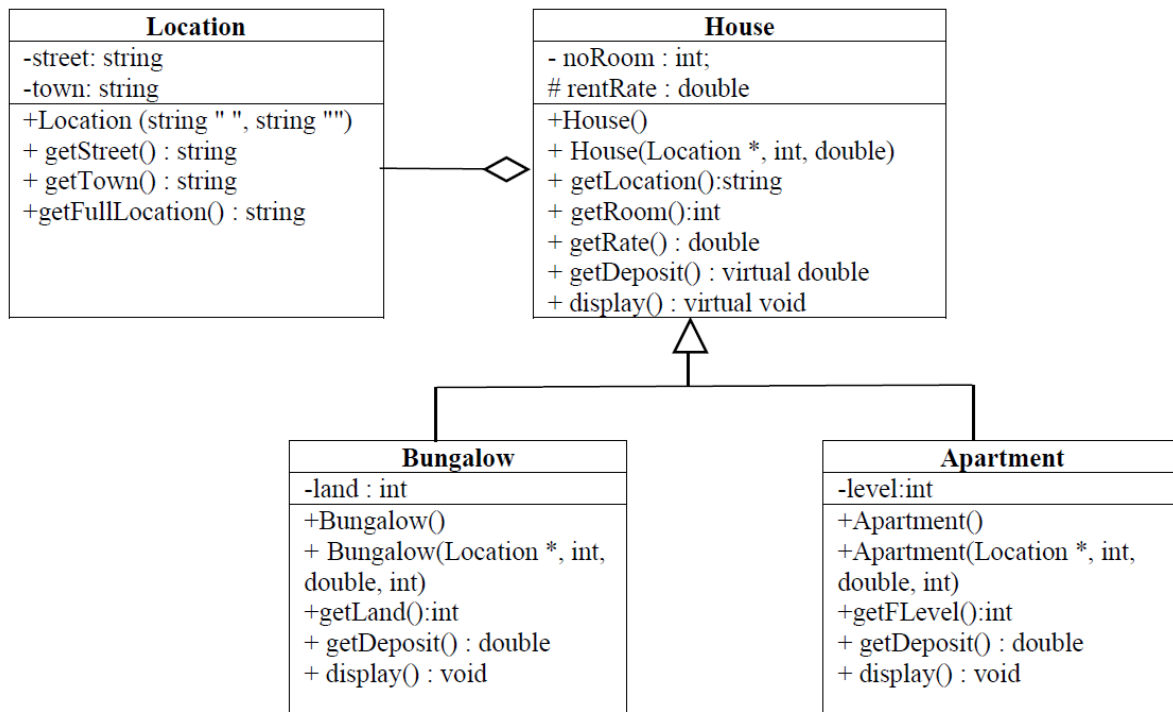

Figure 1. UML Class Diagram

1. Given the class diagram in Figure 1, write C++ program based on the diagram. Note that, the purpose of each operation is as its name implies.
    *   Define class Location, class House, class Bungalow and class Apartment with attributes and methods as shown in the class diagram.
    *   Class House has pure virtual function, namely getDeposit() and display().
    *   The deposit for Bungalow is 6 months rent amount while the deposit for Apartment is 3 months rent amount. The information for Apartment and Bungalow to be displayed in display() function are as shown in Figure 2.

2. Define main() program with the following implementation:
   - Define one Bungalow instance with values as shown in the output in Figure 2.
   - Define two Apartment instances with values as shown in the output in Figure 2.
   - Display the information of all the houses for rent as shown in the Figure 2.

```
*** HOUSE FOR RENT ***

We have a bungalow located at Taman University , Johor Bahru with
6 bedrooms
Land size : 300 sqft.
Monthly rental rate: RM2000.00
Deposit : RM12000.00

We have an apartment located at Pulai Spring Resort, Pulai with 3
bedrooms,
at level 5.
Monthly rental rate: RM800.00
Deposit : RM2400.00

We have an apartment located at Scholars Inn, Universiti Teknologi
Malaysia with 2 bedrooms,
at level 12.
Monthly rental rate: RM700.00
Deposit : RM2100.00
```

Figure 2. Expected Output

Submission:

1. You are required to put your name at the top of your program.

2. Submission of full Source Code
   Make sure you have proper documentation and indentation in your program.