**CS324: Advanced Programming in Java**

**Homework No. 2**

**Due on Friday 17th September.**

**Implement the following UML diagram**. **showDetails function is over-rided in every class** and it’ll will be **printing details particular to that class (polymer maybe)**. Child class showDetails function should call its parent showDetails() by **using super**. Every class have a default constructor as well, which initializes the **attributes randomly**.

Create the **ApplianceFactory Design pattern that creates various appliances** and returns the created objects. You can **create objects randomly.** Use ArrayList collection to store all of the created objects, and then display their details by using an iterator **(store objects in a list and run for loop and call showfcun() maybe? )**.

Note: many of the implementation details are **open-ended in this HW**, you can choose any way as per your discretion. E.g. **move() function should be implemented in Appliance, or in the subclasses**?

