1. A UML class diagram can be used to model UML itself by considering each graphical component to be a class. For example, a **Model** is a collection of **Class**. We could depict this as follows:

```
Model

1

1..*  

Class
```

Construct and draw a class model showing the following UML components: **Model, Class, Association, State diagram, Transition, Composite state, Simple state** (a simple state is a state that contains no other states). In addition to the model, include a written explanation of the model. You may add more classes if you think it’s required. Think carefully about where the state diagram fits in the model and what must be present in the model to have a state diagram.

Hint: Make Composite state and Simple state the subclasses of a superclass called “State Vertex”.