Design a Ship class that has the following members:

* A field for the name of the ship (a String).
* A field for the year that the ship was built (a String).
* A constructor and appropriate accessors and mutators.
* A toString method that displays the ship’s name and the year it was built.

Design a CruiseShip class that extends the Ship class. The CruiseShip class should have the following members:

* A field for the maximum number of passengers (an int).
* A constructor and appropriate accessors and mutators.
* A toString method that overrides the toString method in the base class. The CruiseShip class’s toString method should display only the ship’s name and the maximum number of passengers.

Design a CargoShip class that extends the Ship class. The CargoShip class should have the following members:

* A field for the cargo capacity in tonnage (an int).
* A constructor and appropriate accessors and mutators.
* A toString method that overrides the toString method in the base class. The CargoShip class’s toString method should display only the ship’s name and the ship’s cargo capacity.

Demonstrate the classes in a program (ShipRunner.java) that has a Ship array. Assign various Ship, CruiseShip, and CargoShip objects to the array elements. The program should then step through the array, calling each object’s toString method.

For your submission, you will need to include all source files, output, and a UML diagram.