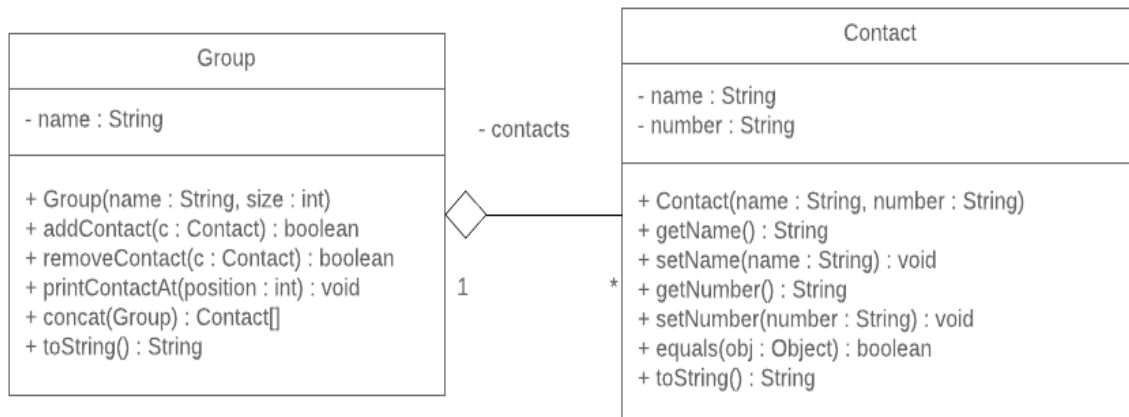


Exercise 1: Create the classes along with the functionality given in the following UML Diagram. To understand the problem, please refer to the description given after the diagram.



Contact Class:

- Attributes:
 - **name**: the name of the contact
 - **number**: the cellphone number of the contact
- Methods:
 - **Contact(name:String, number:String)**: constructor
 - **getName()**: returns the name of the contact
 - **setName(name:String)**: sets the value of the contact's name
 - **getNumber()**: returns the number of the contact
 - **setNumber()**: sets the value of the contact's number
 - **equals(obj:Object)**: compares two objects of type Contact based on their **name&number** and returns the result of the equality
 - **toString()**: this method returns a string representation of the contact

Group Class:

- Attributes:
 - ***name***: the name of the group
- Methods:
 - ***Group(name:String, size:int)***: constructor
 - ***addContact(c:Contact)***: adds a contact to the group if there's space
 - ***removeContact(c:Contact)***: removes a contact from the group if it's there by replacing it with the last contact in the group
 - ***printContactAt(position:int)***: prints the information of the contact at a certain position (e.g. first contact, second, etc)
 - ***concat(g:Group)***: concatenates the contact list of the two groups into one list and returns it
 - ***toString()***: this method returns a string representation of the group

Exercise 2: Write a main method that tests the functionalities of the previous classes.