King Saud University

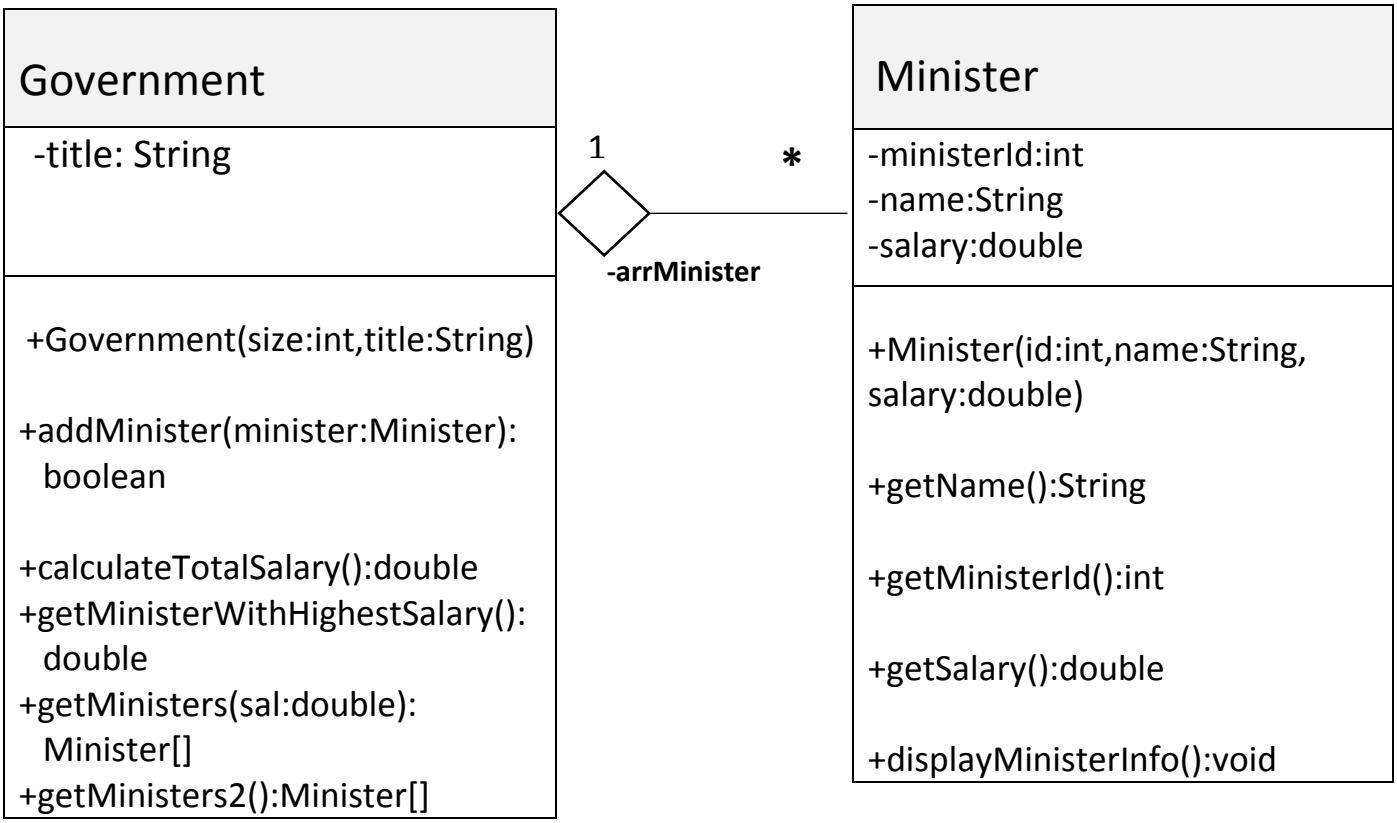
College of Computer and Information Systems

Department of Computer Science

CSC 113: Java Programming-II, spring 2016

Tutorial: Relationship between Classes (Aggregation)

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.



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Minister Class:

- Attributes:
  - ***ministerId***: unique id of the minister.
  - ***name***: the name of the minister.
  - ***salary***: salary of the minister
- Methods:
  - ***Minister(id:int, name: string, salary: int)***: constructor
  - ***displayMinisterinfo()***: this method displays all the attributes of the minister.
  - ***getters***

Government Class:

- Attributes:
  - ***title***: title of the government.
- Methods:
  - ***Government (size:int, title:String)***: constructor
  - ***addMinister(minister:Minister):*** this method adds an minister to the government.
    It returns true if the ***Minister minister*** is added; false otherwise.
  - ***calculateTotalSalary():*** calculates and return the total salary of all the ministers in the government.
  - ***getMinisterWithHighestSalary():***returns the minister of the government having the highest salary.
  - ***getMinisters(double sal):*** Returns an array containing all ministers of the government having a salary greater than sal.
  - ***getMinisters():*** Returns an array containing all ministers each of which has a salary is greater than his predecessor and successor ministers.