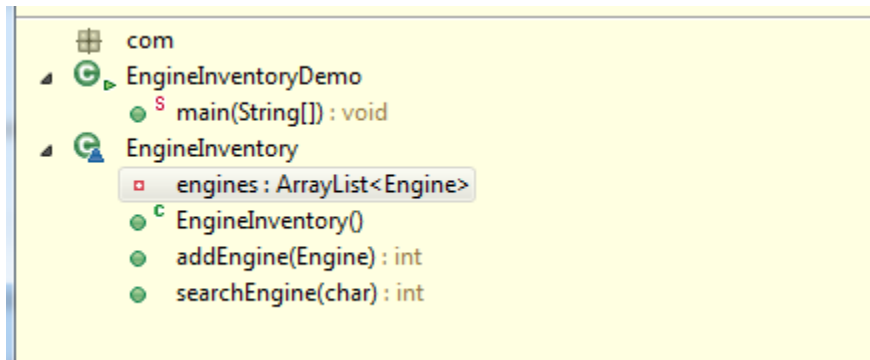


After Question 1 is completed, create below classes in the same com package:



addEngine method will add the Engine object to the engines array list and return the current size of that list. However, it will return -1 if engine with specified id already exists. If specified Engine object is null, then also return -1.

searchEngine will return the engines count based on specified fuelType as parameter ('d' or 'g').

Test your code with below input in main method and specified output:

Input:

```
public static void main(String[] args) {  
  
    EngineInventory inv = new EngineInventory();  
  
    Engine e1 = new TwoStroke(1, 2000, 25, 'g');  
    Engine e2 = new FourStroke(2, 2000, 25, 'g');  
    Engine e3 = new TwoStroke(3, 2000, 25, 'd');  
    Engine e4 = new FourStroke(2, 2000, 25, 'd');  
  
    System.out.println(inv.addEngine(e1));  
    System.out.println(inv.addEngine(e2));  
    System.out.println(inv.addEngine(e3));  
    System.out.println(inv.addEngine(e4));  
  
    System.out.println(inv.searchEngine('g'));  
    System.out.println(inv.searchEngine('d'));  
  
}
```

Output:

```
1  
2  
3  
-1  
2  
1
```

Once done, submit the solution files over iAscert.