

Abstraction

- 1) Create an abstract class. Have properties for departmentName and list of employees without any value and add a method to find an employee without any functionality in this class.

Define another method that has the logic of sorting employees based on the direction parameter and return the employee list.

- 2) Create a class for department information. Use details from the abstract class. Update the employee list property with the relevant data based on the departmentName value. If a method implementation is not available then implement it inside this class.

Note: For finding the employee method, it'll have a name parameter. Add a logic to get a particular employee's details based on the name under the department object. If no employee is matched under department then return this message **'No employee available under this department'**

After defining the class, use it to,

1. Sort 'Finance' department employees in descending order.
2. Sort 'Sales' department employees in ascending order.
3. Find an employee named "Charlie" in the 'Human Resource' department.
4. Find an employee named "William" in 'Operations' department.
5. Find an employee named 'David' in the 'Finance' department.

```
[
  {
    "department": "Marketing",
    "employees": [
      { "name": "James", "age": 20, "email": "James@yopmail.com" },
      { "name": "Jack", "age": 23, "email": "Jack@yopmail.com" },
      { "name": "George", "age": 54, "email": "George@yopmail.com" },
      { "name": "Thomas", "age": 45, "email": "Thomas@yopmail.com" }
    ]
  },
  {
    "department": "Sales",
    "employees": [
      { "name": "John", "age": 45, "email": "John@yopmail.com" },
      { "name": "Daniel", "age": 10, "email": "Daniel@yopmail.com" },
      { "name": "David", "age": 12, "email": "David@yopmail.com" },
      { "name": "Oscar", "age": 15, "email": "Oscar@yopmail.com" }
    ]
  },
  {
    "department": "Finance",
    "employees": [
      { "name": "Michael", "age": 21, "email": "Michael@yopmail.com" },
      { "name": "Noah", "age": 22, "email": "Noah@yopmail.com" },
      { "name": "Robert", "age": 25, "email": "Robert@yopmail.com" },
      { "name": "Liam", "age": 23, "email": "Liam@yopmail.com" }
    ]
  },
  {
    "department": "Human Resource",
    "employees": [
      { "name": "Richard", "age": 22, "email": "Richard@yopmail.com" },
      { "name": "Martin", "age": 21, "email": "Martin@yopmail.com" },
      { "name": "Charlie", "age": 23, "email": "Charlie@yopmail.com" },
      { "name": "Jake", "age": 22, "email": "Jake@yopmail.com" }
    ]
  },
  {
    "department": "Operations",
    "employees": [
      { "name": "Henry", "age": 25, "email": "Henry@yopmail.com" },
      { "name": "Jack", "age": 40, "email": "Jack@yopmail.com" },
      { "name": "William", "age": 16, "email": "William@yopmail.com" },
      { "name": "Alexander", "age": 28, "email": "Alexander@yopmail.com" }
    ]
  }
]
```

