Combining Data Structures: Arrays of Objects

Arrays of Objects: one way of representing a set of objects

Problem – Create an array of objects of class Employee. Fill the array with employee data obtained from the user. Then
   1. Change every employee's name to uppercase,
   2. Print the employee whose name comes first alphabetically.

```java
public class Employee {
    // Instance variables of class Employee
    private String name;         // name of employee
    private double payRate;      // hourly pay rate

    /*Constructor. Sets the name attribute of created object to aname, * payRate to rate */
    public Employee (String aname, double rate  )
    {
        this.name = aname;
        this.payRate = rate;
    }

    /* Accessors */
    public String getName() {
        return this.name;
    }
    public double getPayRate() {
        return this.payRate;
    }

    /* Mutators */
    public void setName(String name) {
        this.name = name;
    }
    public void setPayRate(double payRate) {
        this.payRate = payRate;
    }

    public String toString(){
        return "Employee " + this.name + "pay rate: " + this.payRate;
    }
}
```
public class EmployeeArray {

    public static void main(String[] args) {
        System.out.println("How many employees are there?");
        int numEmployees = kb.nextInt();
        String empName;
        double empRate;

        Scanner kb = new Scanner(System.in);
        // Create an array to store numEmployees Employees
        Employee[] emp = new Employee[numEmployees];
        //
        // The operator new is used to create an array.
        // Note that the above statement
        // does not create any objects of Employee class.

        // Now create Employee objects and add them to
        // the array.
        for (int i = 0; i < emp.length; i++) {
            System.out.println("before emp["+i+"]="+emp[i]);
            // read next employee data
            System.out.print ("Please enter the name");
            empName = kb.nextLine();
            System.out.print ("Please enter the pay rate");
            empRate = kb.nextDouble();
            kb.nextLine(); // skip the residual end of line
            // Create the employee object and store it (the reference)
            // in the array
            emp[i] = new Employee(empName, empRate);
            System.out.println("now  emp["+i+"]="+emp[i]);
        }
        // Change every employee's name to uppercase
    }
// Find the employee whose name is alphabetically first.