



Program screenshots:

The screenshot shows the Programiz Online Java Compiler interface. The browser tabs include 'NEXT Interview Assignment', 'Online Java Compiler - Programiz', 'ChatGPT - Java Employee', 'ChatGPT | OpenAI', 'Python Collection Function', and 'Online Python Compiler'. The address bar shows 'programiz.com/java-programming/online-compiler/'. The main header features the Programiz logo, 'Online Java Compiler', 'Premium Coding Courses by Programiz', and a 'Programiz PRO' button. The code editor on the left shows the following Java code for 'Main.java':1 import java.util.*;
2 import java.util.stream.Collectors;
3
4 class Employee {
5 String id;
6 String name;
7 String department;
8 String gender;
9
10 public Employee(String id, String name, String department, String gender)
11 {
12 this.id = id;
13 this.name = name;
14 this.department = department;
15 this.gender = gender;
16 }
17
18 class CollectionManager {
19 Map<String, List<Employee>> collections = new HashMap<>();
20
21 public void createCollection(String p_collection_name) {
22 collections.put(p_collection_name, new ArrayList<>());
23 System.out.println("Created collection: " + p_collection_name);
24 }
25 }
26 }The 'Run' button is highlighted. The 'Output' panel on the right is empty. The Windows taskbar at the bottom shows the search bar, several application icons, and system tray information including 26°C, 16:55, and 03-10-2024.

This screenshot shows the same Programiz Online Java Compiler interface with updated code in 'Main.java':25- public void indexData(String p_collection_name, String p_exclude_column)
26- {
27- List<Employee> employees = collections.get(p_collection_name);
28- if (p_exclude_column.equalsIgnoreCase("Department")) {
29- for (Employee emp : employees) {
30- emp.department = null;
31- }
32- } else if (p_exclude_column.equalsIgnoreCase("Gender")) {
33- for (Employee emp : employees) {
34- emp.gender = null;
35- }
36- }
37- System.out.println("Indexed data into collection: " +
38- p_collection_name + " excluding column: " + p_exclude_column);
39- }
40- public List<Employee> searchByColumn(String p_collection_name, String
41- p_column_name, String p_column_value) {
42- List<Employee> employees = collections.get(p_collection_name);
43- List<Employee> result = new ArrayList<>();
44- if (p_column_name.equalsIgnoreCase("Department")) {
45- result = employees.stream().filter(emp -> p_column_value.equals
46- (emp.department)).collect(Collectors.toList());
47- } else if (p_column_name.equalsIgnoreCase("Gender")) {
48- result = employees.stream().filter(emp -> p_column_value.equals
49- (emp.gender)).collect(Collectors.toList());
50- }
51- return result;
52- }The 'Run' button remains highlighted. The 'Output' panel is still empty. The Windows taskbar at the bottom shows the search bar, application icons, and system tray information including 31°C, 16:55, and 03-10-2024.

Programiz Online Java Compiler

Premium Coding Courses by Programiz

Programiz PRO

Main.java

```
46      result = employees.stream().filter(emp -> p_column_value.equals
47      (emp_gender)).collect(Collectors.toList());
48  }
49  }
50  public int getEmpCount(String p_collection_name) {
51      return collections.get(p_collection_name).size();
52  }
53  public void delEmpById(String p_collection_name, String p_employee_id) {
54      List<Employee> employees = collections.get(p_collection_name);
55      employees.removeIf(emp -> emp.id.equals(p_employee_id));
56      System.out.println("Deleted employee with ID: " + p_employee_id);
57  }
58  public Map<String, Long> getDepFacet(String p_collection_name) {
59      List<Employee> employees = collections.get(p_collection_name);
60      return employees.stream().filter(emp -> emp.department != null)
61          .collect(Collectors.groupingBy(emp -> emp.department,
62              Collectors.counting()));
63  }
64  }
65  public class EmployeeCollection {
66      public static void main(String[] args) {
67          CollectionManager manager = new CollectionManager();
68      }
```

Output

Clear

Type here to search

16:56 03-10-2024

Programiz Online Java Compiler

Premium Coding Courses by Programiz

Programiz PRO

Main.java

```
69  String v_nameCollection = "Hash_GowthamKrishnaVM";
70  String v_phoneCollection = "Hash_4624";
71
72  manager.createCollection(v_nameCollection);
73  manager.createCollection(v_phoneCollection);
74
75  manager.collections.get(v_nameCollection).add(new Employee("E02001",
76  "Gopi", "IT", "Male"));
77  manager.collections.get(v_nameCollection).add(new Employee("E02002",
78  "Sudha", "HR", "Female"));
79  manager.collections.get(v_nameCollection).add(new Employee("E02003",
80  "Surya", "IT", "Male"));
81
82  manager.collections.get(v_phoneCollection).add(new Employee("E02004",
83  "Ashwin", "Sales", "Male"));
84  manager.collections.get(v_phoneCollection).add(new Employee("E02005",
85  "Sowmya", "HR", "Female"));
86
87  System.out.println("Employee Count (Name Collection): " + manager
88  .getEmpCount(v_nameCollection));
89
90  manager.indexData(v_nameCollection, "Department");
91  manager.indexData(v_phoneCollection, "Gender");
92
93  manager.delEmpById(v_nameCollection, "E02003");
```

Output

Clear

Type here to search

16:57 03-10-2024

Programiz Online Java Compiler

Premium Coding Courses by Programiz

Programiz PRO

Main.java

```
89 System.out.println("Employee Count (Name Collection) after deletion: " + manager.getEmpCount(v_nameCollection));
90
91
92 List<Employee> itEmployees = manager.searchByColumn(v_nameCollection, "Department", "IT");
93 System.out.println("IT Employees (Name Collection): " + itEmployees.size());
94
95 List<Employee> maleEmployees = manager.searchByColumn(v_nameCollection, "Gender", "Male");
96 System.out.println("Male Employees (Name Collection): " + maleEmployees.size());
97
98 List<Employee> itPhoneEmployees = manager.searchByColumn(v_phoneCollection, "Department", "IT");
99 System.out.println("IT Employees (Phone Collection): " + itPhoneEmployees.size());
100
101 Map<String, Long> nameCollectionFacet = manager.getDepFacet(v_nameCollection);
102 System.out.println("Department Facet (Name Collection): " + nameCollectionFacet);
103
104 Map<String, Long> phoneCollectionFacet = manager.getDepFacet
```

Output

Clear

Type here to search

1657 03-10-2024

Programiz Online Java Compiler

Casino Days ANYTIME ANYWHERE. The thrills never stop!

Programiz PRO

Main.java

```
93 System.out.println("IT Employees (Name Collection): " + itEmployees.size());
94
95 List<Employee> maleEmployees = manager.searchByColumn(v_nameCollection, "Gender", "Male");
96 System.out.println("Male Employees (Name Collection): " + maleEmployees.size());
97
98 List<Employee> itPhoneEmployees = manager.searchByColumn(v_phoneCollection, "Department", "IT");
99 System.out.println("IT Employees (Phone Collection): " + itPhoneEmployees.size());
100
101 Map<String, Long> nameCollectionFacet = manager.getDepFacet(v_nameCollection);
102 System.out.println("Department Facet (Name Collection): " + nameCollectionFacet);
103
104 Map<String, Long> phoneCollectionFacet = manager.getDepFacet(v_phoneCollection);
105 System.out.println("Department Facet (Phone Collection): " + phoneCollectionFacet);
106 }
107 }
```

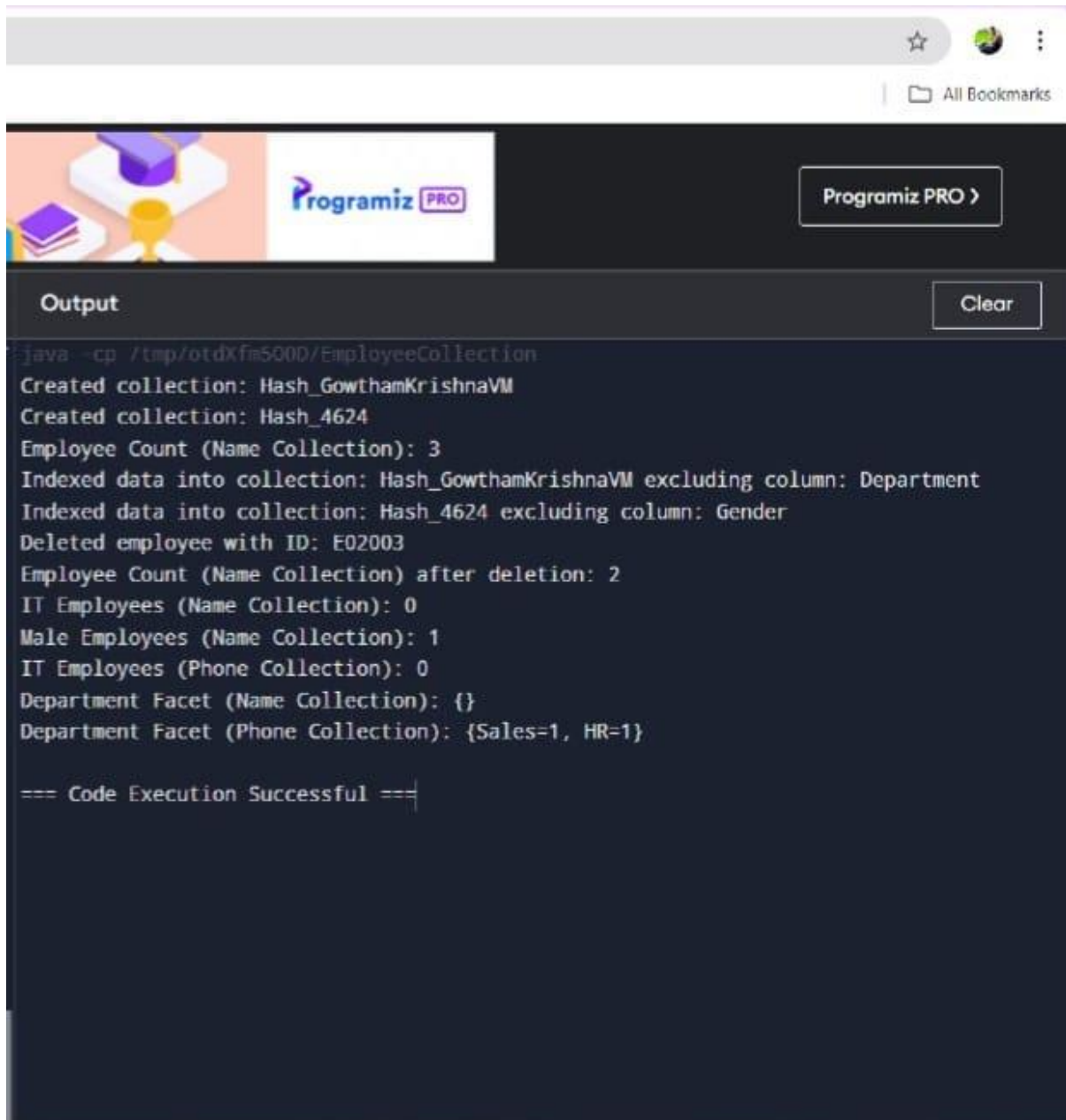
Output

Clear

Type here to search

1657 03-10-2024

Output:



The screenshot shows a web browser window with the Programiz PRO logo and a 'Programiz PRO >' button. Below the header is a dark-themed terminal window titled 'Output' with a 'Clear' button. The terminal displays the following text:

```
java -cp /tmp/otdXfm500D/EmployeeCollection
Created collection: Hash_GowthamKrishnaVM
Created collection: Hash_4624
Employee Count (Name Collection): 3
Indexed data into collection: Hash_GowthamKrishnaVM excluding column: Department
Indexed data into collection: Hash_4624 excluding column: Gender
Deleted employee with ID: E02003
Employee Count (Name Collection) after deletion: 2
IT Employees (Name Collection): 0
Male Employees (Name Collection): 1
IT Employees (Phone Collection): 0
Department Facet (Name Collection): {}
Department Facet (Phone Collection): {Sales=1, HR=1}

=== Code Execution Successful ===
```

Assignment Email:

