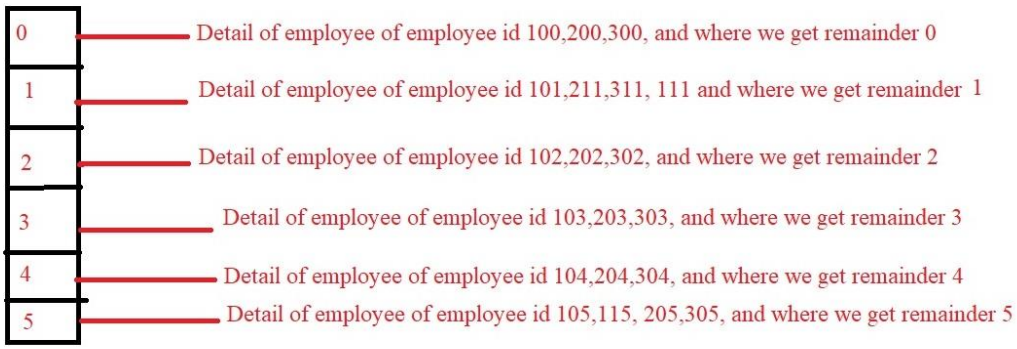
Java Collection Assignments :-

1) WAP to sort Collection elements in ascending order.
2) WAP to store all Collection elements in Array and perform the Binary Search
3) WAP to store elements in List and remove all duplicates value from it. (Numbers should be inserted). When duplicates are removed print all elements in ascending order.
4) WAP to store elements in List and remove all duplicates names of items. After duplicates are removed print all elements in descending order.
5) WAP to store data related to item in Vector and after that sort the data.
6) WAP to store data in hashmap. Keys are the city name and values are the population. Now you have to sort the all elements (on the basis of city name) in hashmap and print the detail.
7) WAP to store the student class objects in List. Student class structure :-
   Student{
   int rollno;
   String sname, classname;
   String totalmarks; // marks out of 500, total five subjects each subject marks 100.
   }
   On the basis of the detail entered by the user. Now you have to perform the following operations.
   a) Print the name of students who secure first, second and third position.
   b) Print name of those students who's marks are below 50%.
   c) Print name of those students who's marks are below 35% it means they are fail.
   d) Print name of those students who's marks are above average score.
   e) Print detail of all students on the basis of Name

8) Consider following class :- class ProductionFacility {
   int pliid;
   String pro_facility_name;
   String pro_fa_location;
   int totalproduction_perday;
   String itemnames[];
   LocalDate prod_date;
   }
   You have to perform following task.
   a) Print the details of facility with highest production per day. (you have to add at least 3 days details of each facility after that you have to calculate average of 3 days on the basis of average you have to print the facility with highest production.
   b) Print detail of facility on the basis of names.
   c) Print which facility is producing highest item.
   d) Print production detail of each facility on the basis of production date.
9) You have to create your own hashing function to store the detail of different employees on the basis of their employee id. Now when a new employee object is about to add into list you have to follow following rule.

```
class Employee
{
  int empid
  String empname;
  int salary;
  String deptname;
  String address;
}
```

Suppose that we are having 10 employees and we are using division method for hashing in division method the remainder become the index of the data to be stored. we are having following employee ids. 101,102,103,110,112,114,104 and so on. now you have to store all the employee details on the basis of their employee id and remainder we get. for example see the below diagram.



Above image illustrate storing the employee details for remainder up to 5 but the same method can be used to store the other employee details with remainder 6,7,8,9 should be store respectively.

10) Suppose that you are given the In-Order traversal of the Binary Search Tree in the form of ArrayList or Array. Now your task is that you have create a new ArrayList or Array for the In-Order traversal of Binary Search Tree where all duplicates are removed.