**Report**

For Step1 I have used Linked List of Project type in class Company. Linked list is one of the most commonly used dynamic data structure in java. This step requires the projects to be sorted alphabetically. Collections package provide method to sort element. That’s why I used linked list for this step. I have made Project class in which have project id, name and budget. This class has constructors and getters setters for mentioned attributes. In company class there are methods for add, delete, show specific project and show all project. I have also made a helping class helping function like in input and pause program for use to see the specific result.

For Step2 I have used Array List of Member type in class Team member class. Array list is also one of the most commonly used dynamic data structure in java. Array list requires data to be placed with id. So I created a count variable that is incremented and decremented for addition and deletion of member. I chose array list for this step because it can help me in step 3 for count of team members. I have made Member class in which have project id, name and salary. This class has constructors and getters setters for mentioned attributes. In company class there are methods for add, delete, show specific member and show all project. I have also made a helping class helping function like in input and pause program for use to see the specific result.

For Step3 I have tried to combine both data structures used in previous steps. I tried to implement the binary search tree like link list and I used the Array list for team member implementation. I have implemented add project, add team member, remove team member, remove project, display specific project, display project alphabetically will all its members and display projects with count of team members. In this class I have used hash maps, linked list of projects, array list, linked list of string. I also have structure of node in which I have link of previous and next node. This structure also stores array list of members and project data.

For all steps I have made test classes so that user can run and test the program. The UI is kept to be simple and attractive. The use inputs are checked at runtime and for use easiness I have provided a pause method so that use can see the output and go head.