```java
package Demo;

public class Institution {
    public int institutionId;
    public String institutionName;
    public int noOfStudentsCleared;
    public int noOfStudentsPlaced;
    public String Location;
    public String Grade;
    //constuctor
    public Institution(int institutionId, String institutionName, int noOfStudentsCleared, int noOfStudentsPlaced,  String Location) {
        this.institutionId=institutionId;
        this.institutionName=institutionName;
        this.noOfStudentsPlaced=noOfStudentsPlaced;
        this.noOfStudentsCleared=noOfStudentsCleared;
        this.Location=Location;
    }
    //getter method
    public int getinstitutionId() {
        return institutionId;
    }
    public String getinstitutionName() {
        return institutionName;
    }
    public int getnoOfStudentsPlaced() {
        return noOfStudentsPlaced;
    }
    public int getnoOfStudentsCleared() {
        return noOfStudentsCleared;
    }
    public String Location() {
        return Location;
    }
    public String  getGrade() {
        return Grade;
    }
    //setter method
    public void setinstitutionId(int institutionId) {
        this.institutionId=institutionId;
    }
    public void setinstitutionName(String institutionName) {
        this.institutionName=institutionName;
    }
```

```
    }
    //setter method
    public void setinstitutionId(int institutionId) {
        this.institutionId=institutionId;
    }
    public void setinstitutionName(String institutionName) {
        this.institutionName=institutionName;
    }
    public void setnoOfStudentsPlaced(int  noOfStudentsPlaced) {
        this.noOfStudentsPlaced=noOfStudentsPlaced;
    }
    public void setnoOfStudentsCleared(int  noOfStudentsCleared) {
        this.noOfStudentsCleared=noOfStudentsCleared;
    }
    public void setLocation(String Location) {
        this.Location=Location;
    }
    public void setGrade(String Grade) {
        this.Grade=Grade;
    }

}
```

ex1.java | module-info... | ex7.java | movierunner... | Solution.java | reverseStri... | Movie1.java | TravelAgenci... | Movie4.java | Institution...

```java
package Demo;
import java.util.Scanner;
public class Solution1 {
    public static void main(String args[]) {
        Scanner s=new Scanner(System.in);
         Institution[] institutions = new Institution[4];

            for (int i = 0; i < 4; i++) {
                int institutionId = s.nextInt();
                s.nextLine(); // Consume newline
                String institutionName = s.nextLine();
                int noOfStudentsPlaced = s.nextInt();
                int noOfStudentsCleared = s.nextInt();
                s.nextLine(); // Consume newline
                String location = s.nextLine();

                institutions[i] = new Institution(institutionId, institutionName, noOfStudentsPlaced, noOfStudentsCleared, location);
            }

            String searchLocation = s.nextLine();
            String searchInstitutionName = s.nextLine();
            s.close();

            // Find number of clearances by location
            int numClearances = findNumClearancedByLoc(institutions, searchLocation);
            if (numClearances > 0) {
                System.out.println(numClearances);
            } else {
                System.out.println("There are no cleared students in this particular location");
            }

            // Update institution grade and print details
            Institution updatedInstitution = updateInstitutionGrade(institutions, searchInstitutionName);
            if (updatedInstitution != null) {
                System.out.println(updatedInstitution.getinstitutionName() + "::" + updatedInstitution.getGrade());
            } else {
                System.out.println("No Institute is available with the specified name");
            }
        }
```

```java
            institutions[i] = new Institution(institutionId, institutionName, noOfStudentsPlaced, noOfStudentsCleared, location);
        }

        String searchLocation = s.nextLine();
        String searchInstitutionName = s.nextLine();
        s.close();

        // Find number of clearances by location
        int numClearances = findNumClearancedByLoc(institutions, searchLocation);
        if (numClearances > 0) {
            System.out.println(numClearances);
        } else {
            System.out.println("There are no cleared students in this particular location");
        }

        // Update institution grade and print details
        Institution updatedInstitution = updateInstitutionGrade(institutions, searchInstitutionName);
        if (updatedInstitution != null) {
            System.out.println(updatedInstitution.getinstitutionName() + "::" + updatedInstitution.getGrade());
        } else {
            System.out.println("No Institute is available with the specified name");
        }
    }

    public static int findNumClearancedByLoc(Institution[] instArray, String location) {
        int sum = 0;
        for (Institution institution : instArray) {
            if (institution.Location().equalsIgnoreCase(location)) {
                sum += institution.getnoOfStudentsCleared();
            }
        }
        return sum;
    }
```

```
        return sum;
    }

    public static Institution updateInstitutionGrade(Institution[] instArray, String instName) {
        for (Institution institution : instArray) {
            if (institution.getinstitutionName().equalsIgnoreCase(instName)) {
                int rating = (institution.getnoOfStudentsPlaced() * 100) / institution.getnoOfStudentsCleared();
                if (rating >= 80) {
                    institution.setGrade("A");
                } else {
                    institution.setGrade("B");
                }
                return institution;
            }
        }
        return null;
    }
}
```

<terminated> Solution1 [Ja

```
111
Amrita
5000
10000
Chennai
222
Karunya
16000
20000
Coimbatore
333
AppleTech
10000
12000
Chennai
444
Aruna
6000
10000
Vellore
Chennai
Karunya
15000
Karunya::A
```