

Silver Creek Constructions(---RETIRED---)

Grade settings: Maximum grade: 100

Disable external file upload, paste and drop external content: Yes

Based on: [Silver Creek Constructions\(---RETIRED---\)](#)

Run: Yes **Evaluate:** Yes

Automatic grade: Yes

Silver Creek Constructions is a well-known construction company across the city. They wanted to find the Project Ids and count of Project Ids based on the construction type. The manager intimates a software developer to help in their process. You, being the software developer, develop a Java program based on the requirement.

Component Specification: ProjectInfoMain Class

Type (Class)	Attributes	Methods
ProjectInfoMain	private Map<String, String> projectMap	Getter and setter methods for the attribute are included in the code skeleton.

Note: Here the projectMap, holds the Key as projectId and Value as constructionType.

Requirement 1: Find the number of projectId based on the given constructionType.

Type (Class)	Methods	Responsibilities
ProjectInfoMain	public int findTheCountOfProjectsBasedOnTheConstructionType (String constructionType)	This method accepts constructionType as an argument. If the constructionType matches the constructionType present in the Map, it must count the projects and return the same. Else return -1. Condition: constructionType is a case-insensitive

Requirement 2: Filter the projectIds based on the constructionType.

Type (Class)	Methods	Responsibilities
ProjectInfo Main	public List<String> findProjectIdsBasedOnTheConstruc tionType (String constructionType)	This method filters the constructionType and returns the list of constructionType that have the same constructionType. <i>Condition: constructionType is a case-insensitive</i>

You are provided with the main method as code template and it is excluded from evaluation.

Note:

- In the Sample Input / Output provided, the highlighted text in bold corresponds to the input given by the user, and the rest of the text represents the output.
- Ensure to follow the object-oriented specifications provided in the question description.
- Ensure to provide the names for the classes, attributes, and methods as specified in the question description.
- Adhere to the code template, if provided.

Sample Input/Output 1:

Enter number of projects to be added

3

Enter the project (Project Id: Construction type)

ASHG2376:Industry

DJDJ2838:Residential

AJSH2938:Bridges

Enter the Construction type to be searched

INDUSTRY

The projects based on INDUSTRY are 1

Enter the Construction type to identify the Projects Ids

bridges

Projects based on the bridges are

AJSH2938

Sample Input/Output 2:

Enter number of projects to be added

2

Enter the project (Project Id: Construction type)

JSDH2989:Roads

JSHD1298:Bridges

Enter the Construction type to be searched

RESIDENTIAL

No projects were found for RESIDENTIAL

Enter the Construction type to identify the Projects Ids

INDUSTRIAL

No Projects Ids were found for the INDUSTRIAL

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File List Save Compile & Run Evaluate Reset Restore Description

File list

ProjectInfo

ProjectInfoMain.java

```
1 import java.util.ArrayList;
2 import java.util.HashMap;
3 import java.util.List;
4 import java.util.Map;
5 import java.util.Scanner;
6
7 public class ProjectInfoMain {
8
9     private Map<String,String> projectMap=new HashMap<String,String>();
10
11     public Map<String, String> getProjectMap() {
12         return projectMap;
13     }
14
15     public void setProjectMap(Map<String, String> projectMap) {
16         this.projectMap = projectMap;
17     }
18
19     public int findTheCountOfProjectsBasedOnTheConstructionType(String constructionType) {
20         //Fill the code
21         return 0;
22     }
23
24     public List<String> findProjectIdsBasedOnTheConstructionType(String constructionType){
25         //Fill the code
26         return null;
27     }
28
29
30     public static void main(String args[]) {
31         // You are provided with the main method as code template and it is excluded from evaluation.
32         ProjectInfoMain office=new ProjectInfoMain();
33         List<String> list=new ArrayList<String>();
34         Map<String, String> map=new HashMap<String,String>();
35         Scanner sc=new Scanner(System.in);
36         System.out.println("Enter number of projects to be added");
37         int n=sc.nextInt();
```

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ProjectInfo

ProjectInfoMain.java

```
28 }
29
30 public static void main(String args[]) {
31     // You are provided with the main method as code template and it is excluded from evaluation.
32     ProjectInfoMain office=new ProjectInfoMain();
33     List<String> list=new ArrayList<String>();
34     Map<String, String> map=new HashMap<String,String>();
35     Scanner sc=new Scanner(System.in);
36     System.out.println("Enter number of projects to be added");
37     int n=sc.nextInt();
38     System.out.println("Enter the project (Project Id: Construction type)");
39     String [] projectDetails = new String[n];
40     for(int i=0;i<n;i++) {
41         projectDetails[i] = sc.next();
42     }
43
44     for(int i=0;i<projectDetails.length;i++) {
45         String[] a = projectDetails[i].split(":");
46         map.put(a[0], a[1]);
47         office.setProjectMap(map);
48     }
49
50
51
52     System.out.println("Enter the Construction type to be searched");
53     String searchType=sc.next();
54
55     int count=office.findTheCountOfProjectsBasedOnTheConstructionType(searchType);
56     if(count>0)
57     {
58         System.out.println("The projects based on "+searchType+" are "+count);
59     }
60     else
61     {
62         System.out.println("No projects were found for "+searchType);
63     }
64 }
```

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File List Save Compile & Run Evaluate Reset Restore Description

File list

- ProjectInfo
 - src
 - ProjectInfo

ProjectInfoMain.java

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    office.setProjectMap(map);
}

System.out.println("Enter the Construction type to be searched");
String searchType=sc.next();

int count=office.findTheCountOfProjectsBasedOnTheConstructionType(searchType);
if(count>0)
{
    System.out.println("The projects based on "+searchType+" are "+count);
}
else
{
    System.out.println("No projects were found for "+searchType);
}

System.out.println("Enter the Construction type to identify the Projects Ids");
String constructionType=sc.next();

list=office.findProjectIdsBasedOnTheConstructionType(constructionType);

if(list.size()>1) {
    System.out.println("Projects based on the "+constructionType+" are ");
    for(String s:list)
    {
        System.out.println(s);
    }
}
else
    System.out.println("No Projects Ids were found for the "+constructionType);
}
```