

Salesforce Project Implementation Phases with Concepts (Admin + Developer)

Problem Statement: Construction companies often struggle to manage communication among multiple stakeholders such as clients, project managers, vendors, contractors, and subcontractors. Since updates, approvals, and requirements are exchanged through scattered channels like phone calls, emails, and spreadsheets, important information is often lost or delayed. This lack of a centralized system results in miscommunication, project delays, cost overruns, and reduced client satisfaction.

Proposed Solution : A tailored Construction CRM solution is needed to streamline communication, track tasks, manage vendor/contractor interactions, and provide real-time project updates, thereby improving efficiency, accountability, and client trust.

Phase 5: Apex Programming

1. **CLASSES AND OBJECTS:**

Apex class `ProjectService` is written to **automatically assign a default Project Manager to projects that don't already have one.**

Apex Class

ProjectService

Help for this Page ?

Apex Class Detail

EditDeleteDownloadSecurityShow Dependencies

Name	ProjectService	Status	Active
Namespace Prefix		Code Coverage	0% (0/5)
Created By	Rajatveer Singh Pasricha , 9/28/2025, 6:52 AM	Last Modified By	Rajatveer Singh Pasricha , 9/28/2025, 6:52 AM

Class Body

Class SummaryVersion SettingsTrace Flags

```
1 public class ProjectService {
2     public static void assignDefaultPM(List<Project__c> projects){
3         // Get one default Project Manager user dynamically
4         User defaultPM = [SELECT Id FROM User WHERE Profile.Name = 'Project Manager' LIMIT 1];
5
6         for(Project__c p : projects){
7             if(p.Project_Manager__c == null){
8                 p.Project_Manager__c = defaultPM.Id;
9             }
10        }
11    }
12 }
```

EditDeleteDownloadSecurityShow Dependencies

<div> <div>Logs</div> <div>Tests</div> <div>Checkpoints</div> <div>Query Editor</div> <div>View State</div> <div>Progress</div> <div>Problems</div> </div>							
User	Application	Operation	Time	Status	Read	Size	
Rajatveer Singh Pasricha	Browser	/setup/build/editApexTr...	9/28/2025, 7:25:25 PM	Success	Unread	1.16 KB	
Rajatveer Singh Pasricha	Browser	/setup/build/editApexTr...	9/28/2025, 7:25:09 PM	Success	Unread	376 bytes	
Rajatveer Singh Pasricha	Browser	/setup/build/editApexTr...	9/28/2025, 7:25:03 PM	Success	Unread	1.36 KB	
Rajatveer Singh Pasricha	Browser	/setup/build/editApexCl...	9/28/2025, 7:22:02 PM	Success	Unread	1.16 KB	
Rajatveer Singh Pasricha	Browser	/setup/build/editApexCl...	9/28/2025, 7:20:58 PM	Success	Unread	1.37 KB	
Rajatveer Singh Pasricha	Browser	/setup/build/listApexCl...	9/28/2025, 7:20:25 PM	Success	Unread	630 bytes	
<div> <input type="checkbox"/> Filter Click here to filter the log list </div>							

2. APEX TRIGGERS:

This trigger is tied to your `Project__c` object. Its purpose is to **automatically assign a default Project Manager whenever a new Project record is created.**

Apex Trigger

ProjectTrigger

Help for this Page ?

Apex Trigger Detail

Edit

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Show Dependencies

Name	ProjectTrigger	sObject Type	Project
Code Coverage	0% (0/2)	Status	Active
Created By	Rajatveer Singh Pasricha	Last Modified By	Rajatveer Singh Pasricha
Created	9/28/2025, 6:55 AM	Last Modified	9/28/2025, 6:55 AM
Namespace Prefix			

Apex Trigger

Version Settings

Trace Flags

```

1 trigger ProjectTrigger on Project__c (before insert, before update) {
2   if (Trigger.isBefore && Trigger.isInsert) {
3     ProjectService.assignDefaultPM(Trigger.new);
4   }
5 }

```

Edit

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Show Dependencies

3. SOSL and SOQL:

SOQL Query:

Pull out **Project records** where the `Project_Code__c` starts with "PC-1"

Developer Console - Google Chrome

orgfarm-b3be33c62b-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage?action=selectExtent&extent=apexclass

File Edit Debug Test Workspace Help < >

Log executeAnonymous @9/29/2025, 2:46:11 PM

Execution Log

Timestamp	Event	Details
14:46:11:001	USER_INFO	[EXTERNAL][005fj0000061F9d rajatveer1234465@as
14:46:11:001	EXECUTION_ST...	
14:46:11:001	CODE_UNIT_ST...	[EXTERNAL] execute_anonymous_apex
14:46:11:002	HEAP_ALLOCATE	[95] Bytes:3
14:46:11:002	HEAP_ALLOCATE	[100] Bytes:152
14:46:11:002	HEAP_ALLOCATE	[417] Bytes:408
14:46:11:002	HEAP_ALLOCATE	[430] Bytes:408
14:46:11:002	HEAP_ALLOCATE	[317] Bytes:6
14:46:11:002	HEAP_ALLOCATE	[EXTERNAL] Bytes:11
14:46:11:002	STATEMENT_EX...	[1]
14:46:11:002	STATEMENT_EX...	[1]
14:46:11:002	STATEMENT_EX...	[2]
14:46:11:002	HEAP_ALLOCATE	[2] Bytes:98
14:46:11:002	HEAP_ALLOCATE	[2] Bytes:4
14:46:11:002	HEAP_ALLOCATE	[68] Bytes:5
14:46:11:002	HEAP_ALLOCATE	[74] Bytes:5
14:46:11:002	HEAP_ALLOCATE	[82] Bytes:7
14:46:11:002	SOQL_EXECUTE...	[2] Aggregations:0 SELECT Project_Code__c, Name, Project_Status__c FROM Project__c WHERE Project_Code__c LIKE 'PC-1%'
14:46:11:015	SOQL_EXECUTE...	[2] Rows:0
14:46:11:015	HEAP_ALLOCATE	[2] Bytes:4
14:46:11:015	HEAP_ALLOCATE	[2] Bytes:0

Enter Apex Code

```
1  List<Project__c> projects = [  
2      SELECT Project_Code__c, Name, Pro  
3      FROM Project__c  
4      WHERE Project_Code__c LIKE 'PC-1%'  
5  ];  
6  
7  
8  for(Project__c p : projects){  
9      System.debug('Project Code: ' + p  
10         ', Name: ' + p.Name  
11         ', Project Status: '  
12  }
```

☒ Open Log

☐ This Frame ☐ Executable ☐ Debug Only ☐ Filter

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Rajatveer Singh Pasricha	Unknown	/services/data/v64.0/to...	9/29/2025, 2:46:11 PM	Success		3.1 KB

☐ Filter

SOSL Query:

Search **all Account fields** for values starting with "Tech".

Developer Console - Google Chrome

orgfarm-b3be33c62b-dev-ed.develop.my.salesforce.com/_ui/common/apex/debug/ApexCSIPage?action=selectExtent&extent=apexclass

File Edit Debug Test Workspace Help < >

Log executeAnonymous @9/29/2025, 2:53:23 PM

Execution Log

Timestamp	Event	Details
14:53:23:001	USER_INFO	[EXTERNAL][005f0000061F9d rajatveer1234465@agentforce.com ([GMT-07:00] Pacific Daylight Time (America/Los_Angeles))GMT-07:00
14:53:23:001	EXECUTION_ST...	
14:53:23:001	CODE_UNIT_ST...	[EXTERNAL] execute_anonymous_apex
14:53:23:002	HEAP_ALLOCATE	[95] Bytes:3
14:53:23:002	HEAP_ALLOCATE	[100] Bytes:152
14:53:23:002	HEAP_ALLOCATE	[417] Bytes:408
14:53:23:002	HEAP_ALLOCATE	[430] Bytes:408
14:53:23:002	HEAP_ALLOCATE	[317] Bytes:6
14:53:23:002	HEAP_ALLOCATE	[EXTERNAL] Bytes:14
14:53:23:002	STATEMENT_EX...	[1]
14:53:23:002	STATEMENT_EX...	[1]
14:53:23:002	STATEMENT_EX...	[2]
14:53:23:002	HEAP_ALLOCATE	[2] Bytes:71
14:53:23:002	HEAP_ALLOCATE	[2] Bytes:4
14:53:23:002	HEAP_ALLOCATE	[68] Bytes:5
14:53:23:002	HEAP_ALLOCATE	[74] Bytes:5
14:53:23:002	HEAP_ALLOCATE	[82] Bytes:7
14:53:23:003	SOSL_EXECUTE...	[2] FIND "Tech*" IN ALL FIELDS RETURNING account(Id, Name, Industry, Phone)
14:53:23:345	HEAP_ALLOCATE	[2] Bytes:4
14:53:23:345	HEAP_ALLOCATE	[2] Bytes:8
14:53:23:345	SOSL_EXECUTE...	[2] Rows:0

Enter Apex Code

```
3      FIND 'Tech*' IN ALL FIELDS
4      RETURNING Account(Id, Name, Indus
5  ];
6
7  List<Account> accounts = (List<Accoun
8
9  for(Account acc : accounts){
10     System.debug('Found Account: ' +
11                 ', Industry: ' + acc
12                 ', Phone: ' + acc.Ph
13
```

☒ Open Log Execute Execute Highlighted

☐ This Frame ☐ Executable ☐ Debug Only ☐ Filter Click here to filter the log

Logs Tests Checkpoints Query Editor View State Progress Problems

User	Application	Operation	Time	Status	Read	Size
Rajatveer Singh Pasricha	Unknown	/services/data/v64.0/to...	9/29/2025, 2:53:23 PM	Success		3.37 KB

“REST ALL OTHER SETUPS ARE NOT
REQUIRED FOR INITIAL PAHSE OF MY
PROJECT”