



UML OOP JAVA FINAL PROJECT REPORT “Epitrello”

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Background of the project

Project Management is always complicated and full of challenges. Hence, knowing the project going-on and tracking project status are the key elements of the successful project. In order to do that, we need efficient tools to hand on with the person in charge of project management. This is the key motivation for creating project “Epitrello”.

With “Epitrello”, users or project manager can easily distribute the task to all project team members and tracking all the jobs-to-be-done status at any time needed. “Epitrello” allows to create news users with task and relevant information about the task. Then it will give users the tracking function with timeline tracking in order to know the status as finished/unfinished, as such users can have proper re-action on the tasks: assign, edit, move task. And finally, users can also see the performance of the project/task in order to have lesson and learning for upcoming projects.

System Specifications

- ✓ Java Open JDK8U
- ✓ Eclipse
- ✓ Operating System: Microsoft Windows 10
- ✓ Astah UML
- ✓ Team-work platform: SourceTree and GitHub

Data Structure

This project applied the Data Structure which used:

- ArrayList: We are storing tasks in User and TaskList as an ArrayList because the size of the ArrayList does not need to be initialized, therefore, elements can be added and removed from an ArrayList as many as necessary.
- Map: Because the program use username as a unique field to define user, so we use Map to store a map of users, with username as key and user as value. This helps us easier to find user.
- LinkedHashMap: Because HashMap cannot guarantee the order of each entry, so we use LinkedHashMap to remain the insertion order. This helps us to remain the order of list and task by creation order.

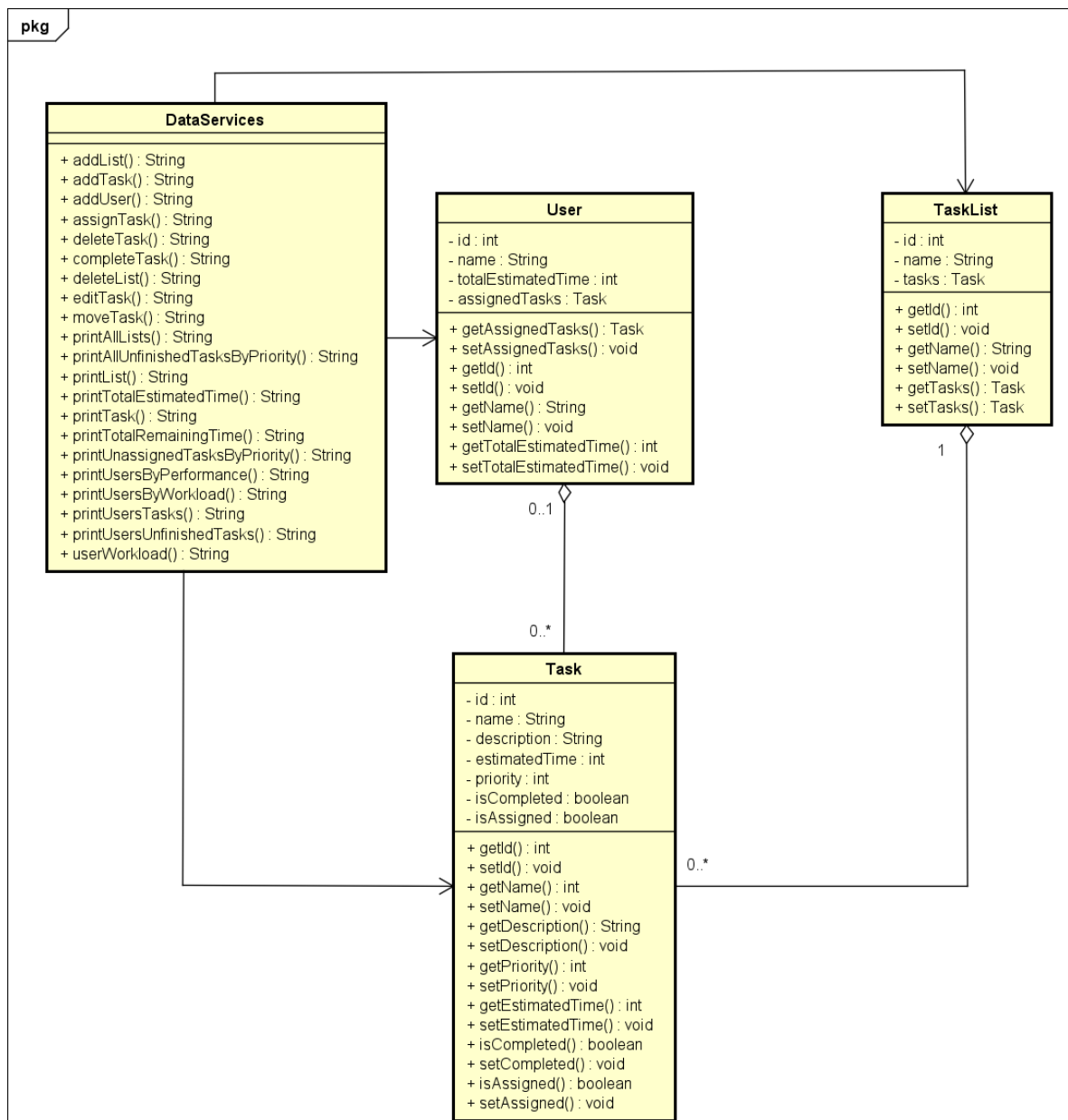
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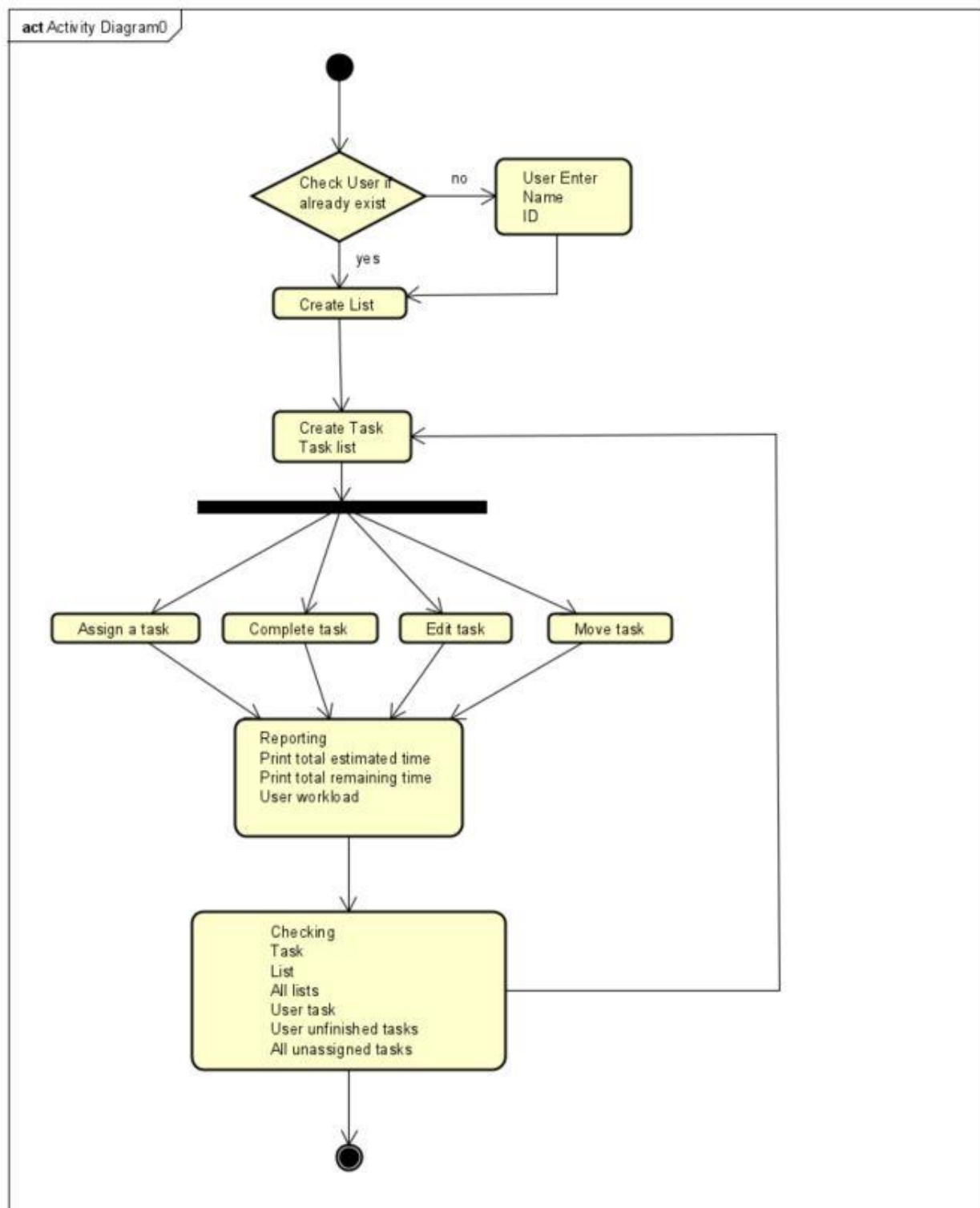
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UML Class Diagram



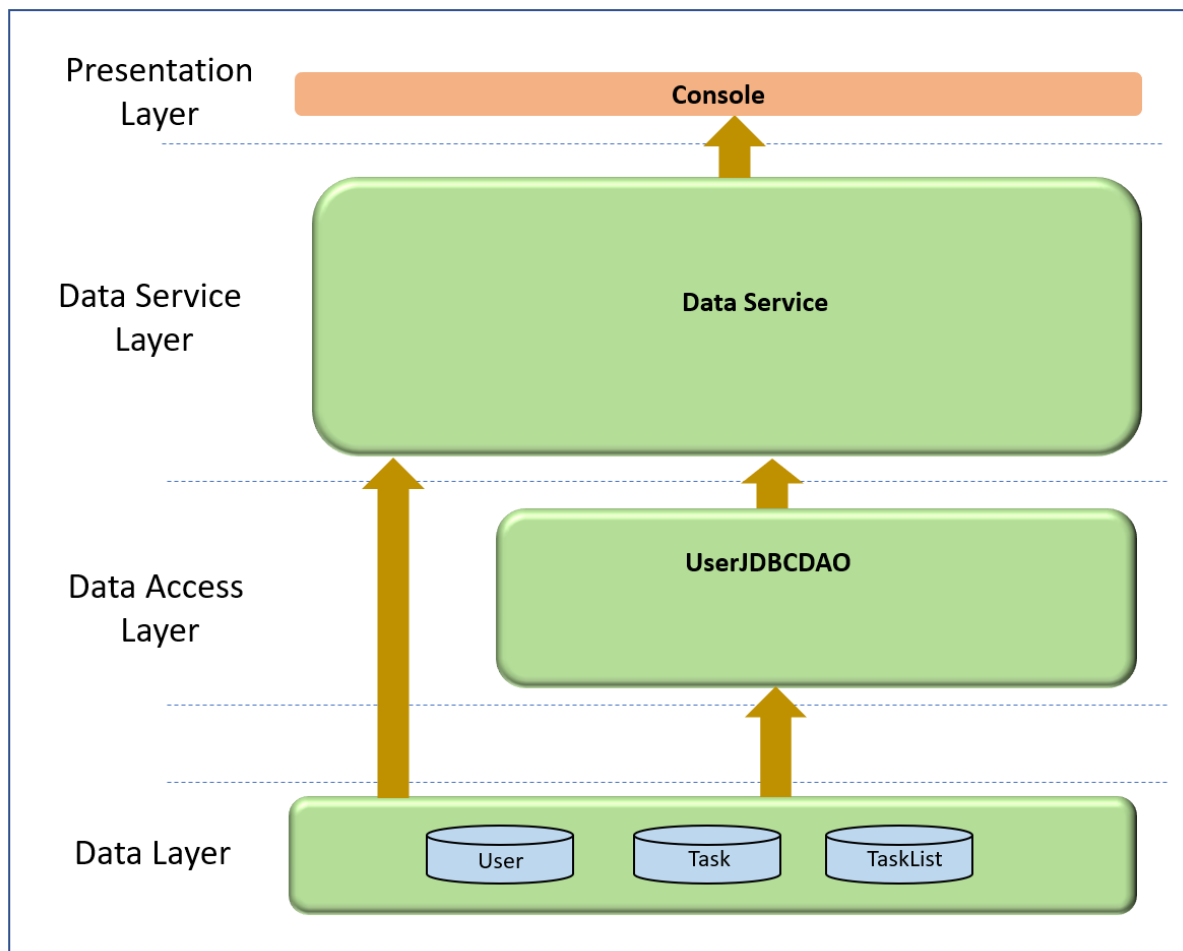
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Activities Diagram



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Software Architecture Diagram



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Code Quality Report

- **SonarLint Report**

| Resource | Date | Description |
|------------------|------|--|
| DataService.java | | 🔴🟢 Use a StringBuilder instead. |
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| DataService.java | | 🔴🟢 Use a StringBuilder instead. |
| DataService.java | | 🔴🟢 Use a StringBuilder instead. |
| Launcher.java | | 🔴📘 Complete the task associated to this TODO comment. |
| Launcher.java | | 🔴📘 Complete the task associated to this TODO comment. |
| Launcher.java | | 🔴📘 Complete the task associated to this TODO comment. |
| Launcher.java | | 🔴🟢 Use a logger to log this exception. |
| Launcher.java | | 🔴🔴 Replace this use of System.out or System.err by a logger. |
| Launcher.java | | 🔴🔴 Replace this use of System.out or System.err by a logger. |
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| Launcher.java | | 🔴🔴 Replace this use of System.out or System.err by a logger. |
| Launcher.java | | 🔴🔴 Replace this use of System.out or System.err by a logger. |
| Launcher.java | | 🔴🔴 Define a constant instead of duplicating this literal "AmirAli" 3 times. |
| Launcher.java | | 🔴🔴 Define a constant instead of duplicating this literal "Do Everything" 5 times. |
| Launcher.java | | 🔴🔴 Define a constant instead of duplicating this literal "Have fun" 3 times. |
| TestJDBC.java | | 🔴🔴 Replace this use of System.out or System.err by a logger. |
| TestJDBC.java | | 🔴🔴 Replace this use of System.out or System.err by a logger. |
| TestJDBC.java | | 🔴🔴 Replace this use of System.out or System.err by a logger. |
| TestJDBC.java | | 🔴💡 'password' detected in this expression, review this potentially hard-coded credential. |
| TestJDBC.java | | 🔴💡 Remove this hard-coded password. |
| User.java | | 🔴🟢 Replace the type specification in this constructor call with the diamond operator ("<>"). |
| UserJDBCAO.java | | 🔴🟢 Use a logger to log this exception. |
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| UserJDBCAO.java | | 🔴🟢 Use a logger to log this exception. |
| UserJDBCAO.java | | 🔴🔴 Define a constant instead of duplicating this literal "USERNAME" 3 times. |
| UserJDBCAO.java | | 🔴💡 'password' detected in this expression, review this potentially hard-coded credential. |
| UserJDBCAO.java | | 🔴💡 Remove this hard-coded password. |

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- Javadoc

OVERVIEWPACKAGECLASSUSE TREE DEPRECATEDINDEXHELP

ALL CLASSES

SUMMARY | NESTED | FIELD | CONSTR | METHODDETAIL | FIELD | CONSTR | METHOD

SEARCH 🔍 Search

Package fr.epita.epitello.services

Class DataService

java.lang.Object
fr.epita.epitello.services.DataService

public class DataService
extends java.lang.Object

Author:
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Constructor Summary

Constructors

| Constructor | Description |
|----------------------------|-------------|
| <code>DataService()</code> | |

Method Summary

All MethodsInstance MethodsConcrete Methods

| Modifier and Type | Method | Description |
|-------------------|---|-------------|
| java.lang.String | <code>addList(java.lang.String name)</code> | |
| java.lang.String | <code>addTask(java.lang.String listName, java.lang.String name, int estimatedTime, int priority, java.lang.String description)</code> | |
| java.lang.String | <code>addUser(java.lang.String name)</code> | |
| java.lang.String | <code>assignTask(java.lang.String taskName, java.lang.String userName)</code> | |
| java.lang.String | <code>completeTask(java.lang.String taskName)</code> | |
| java.lang.String | <code>deleteList(java.lang.String name)</code> | |
| java.lang.String | <code>deleteTask(java.lang.String name)</code> | |
| java.lang.String | <code>editTask(java.lang.String name, int estimatedTime, int priority, java.lang.String description)</code> | |
| java.lang.String | <code>getOutput()</code> | |
| java.lang.String | <code>moveTask(java.lang.String taskName, java.lang.String listName)</code> | |
| java.lang.String | <code>printAllLists()</code> | |
| java.lang.String | <code>printAllUnfinishedTasksByPriority()</code> | |
| java.lang.String | <code>printList(java.lang.String name)</code> | |
| java.lang.String | <code>printTask(java.lang.String taskName)</code> | |
| java.lang.String | <code>printTotalEstimatedTime()</code> | |
| java.lang.String | <code>printTotalRemainingTime()</code> | |
| java.lang.String | <code>printUnassignedTasksByPriority()</code> | |
| java.lang.String | <code>printUsersByPerformance()</code> | |
| java.lang.String | <code>printUsersByWorkLoad()</code> | |
| java.lang.String | <code>printUserTasks(java.lang.String userName)</code> | |
| java.lang.String | <code>printUserUnfinishedTasks(java.lang.String userName)</code> | |
| java.lang.String | <code>userWorkLoad(java.lang.String userName)</code> | |

Methods inherited from class java.lang.Object
`equals, getClass, hashCode, notify, notifyAll, toString, wait, wait, wait`

Constructor Detail

DataService

`public DataService()`

Method Detail

getOutput

`public java.lang.String getOutput()`

addUser

`public java.lang.String addUser(java.lang.String name)`

Parameters:
name - the name of the user that need to be created

Returns:
"User already existed" if name exists in table USER, return "Success" if user is created successfully, otherwise return "Failed"

addList

`public java.lang.String addList(java.lang.String name)`

Parameters:
name - the name of the list that need to be created

Returns:
"List already existed" if name of list exists, return "Success" if list is created successfully, otherwise return "Failed"

addTask

`public java.lang.String addTask(java.lang.String listName, java.lang.String name, int estimatedTime, int priority, java.lang.String description)`

Parameters:
listName - the name of the list in which task is added
name - the name of the task that need to be added into list
estimatedTime - the necessary time to complete the task
priority - the importance level of the task
description - the information that describe the task

Returns:
"Task already existed" if name of task exists, return "List does not exist" if listName does not exist, return "Success" if task is created and added into list successfully, otherwise return false

editTask

`public java.lang.String editTask(java.lang.String name, int estimatedTime, int priority, java.lang.String description)`

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Screen Shot – Commented

```
Console x Problems Debug Shell
<terminated> Launcher [Java Application] C:\Program Files\Ad
Success
Success
Success
Success
Success
Success
Success
Success
Success
Success
Do Everything
Write the whole code
Priority: 10
Estimated Time: 12
Assigned to RabiH

Success
Success
Success
Success
Success
Success
RabiH
Thomas
AmirAli

Thomas
AmirAli
RabiH

1 | Upload Assignment | Unassigned | 1h

Success
1 | Write Description | AmirAli | 3h
2 | Destroy code formatting | Thomas | 1h

Success
Success
Have fun
Just do it
Priority: 2
Estimated Time: 10
Unassigned

List Code
10 | Do Everything | RabiH | 12h
2 | Destroy code formatting | Thomas | 1h
2 | Have fun | Unassigned | 10h

List Code
10 | Do Everything | RabiH | 12h
2 | Destroy code formatting | Thomas | 1h
2 | Have fun | Unassigned | 10h

List Description
1 | Write Description | AmirAli | 3h

List Misc

1 | Write Description | AmirAli | 3h
2 | Have fun | Unassigned | 10h

1 | Write Description | AmirAli | 3h
2 | Destroy code formatting | Thomas | 1h
2 | Have fun | Unassigned | 10h
```

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