Sultan Qaboos University - College of Science
Department of Computer Science
COMP5405 : Software Patterns Project - Spring2022

Project Phase 3 :
Task Manager project

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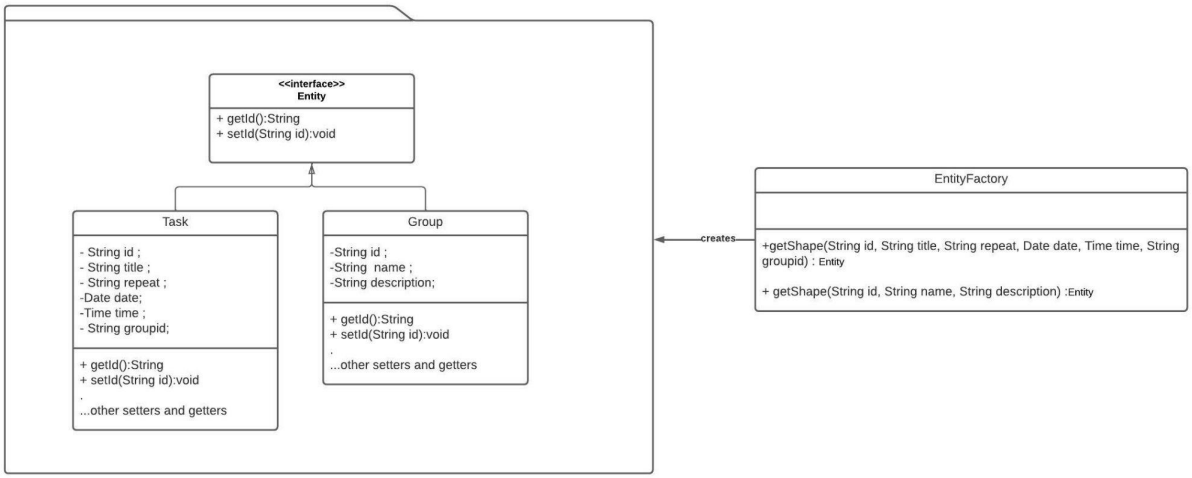
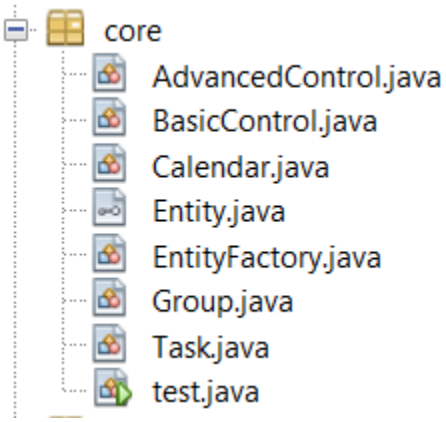
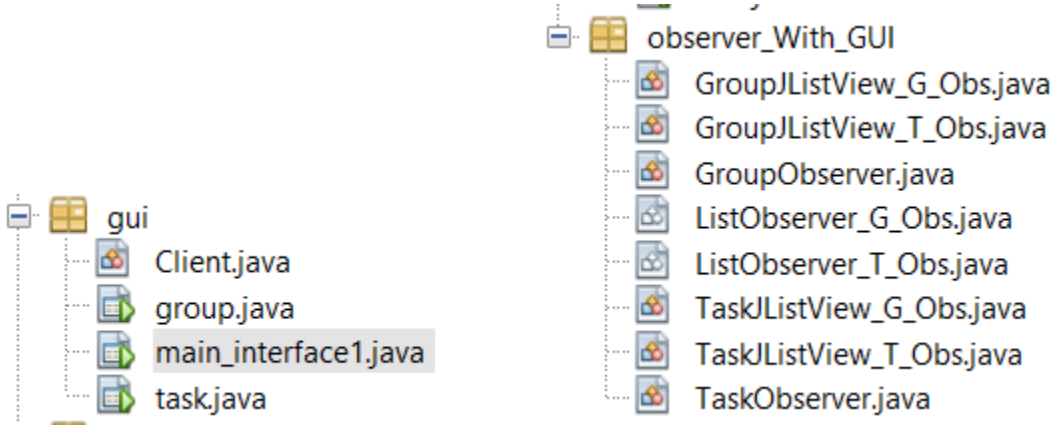
1.1 Core package implementation

Factory pattern - bonus :

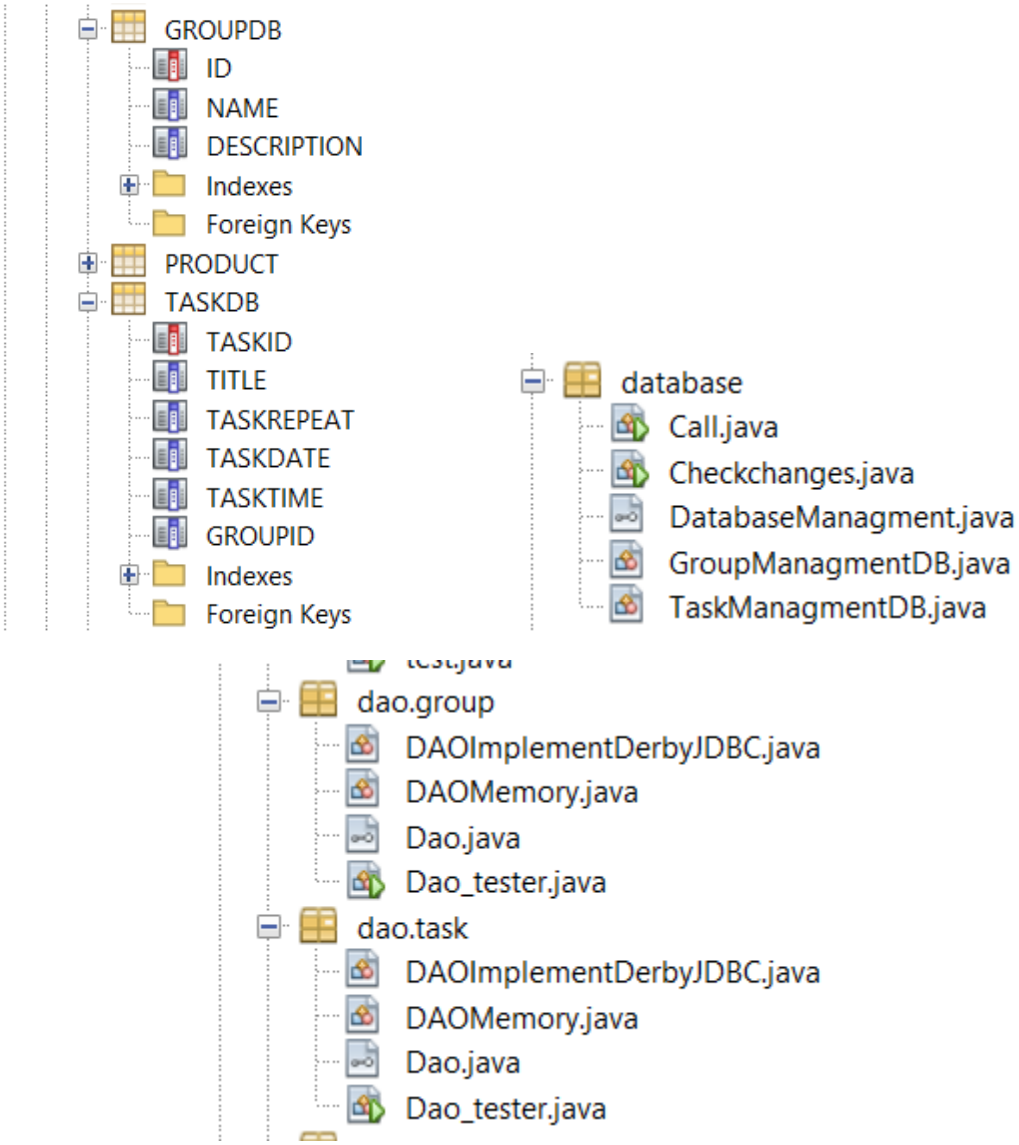




1.2 GUI package implementation



1.3 DOA pattern packages and database package implementation



2.Testing :

2.1 Testing The Classes

In every Package we add a test class that will test all the classes in the same package :

1. In the core package we have a class called “test”.
2. In the Dao.group package we have a class called “Dao_tester”.
3. In the Dao.task package we have a class called “Dao_tester”.
4. In the Database package we have two classes for testing “Call” and “Checkchanges”.

However In the Gui Package we test it visually because we find it easier to check it all.

2.2 Integration Testing

Integration between the database and the package database black box testing

GroupManagmentDB class:

This class has many methods :

1) add_record(String group_id,String name ,String description) :

we have three parameters in this method :String id, String name, String description

G : group_id ,G1 : not null and unique ,G2 : null , G3 :repeated (duplicated)

N : name ,N1 : not null ,N2 : null

D : description , D1 : not null , N2 :null

We will focus on critical conditions :

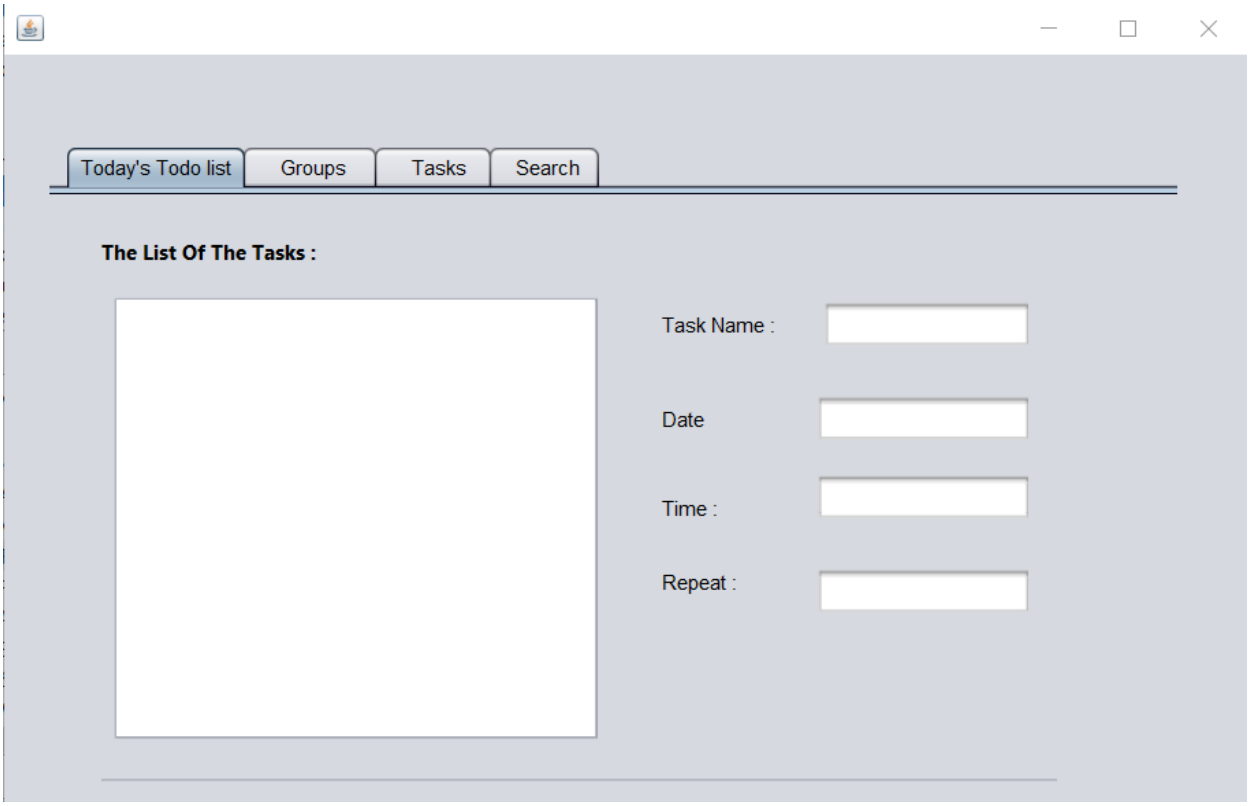
Test case number	**Domain of variables used**	**The expected output**	**The actual output**

1	G1,N1,D1	Valid no error , The record will be added	The same as expected
2	G1 ,N2,D1	Invalid an error will occur Name cannot be null and the record will not be inserted	The same as expected
3	G1 ,N1,D2	Valid description can be null the record will be added	The same as expected
4	G2,N1,D1	Invalid the group id can not be null. The record will not be added	The same as expected
5	G3,N1,D1	Invalid the group id can not be repeated in the database . The record will not be added	The same as expected

2.3 System Testing

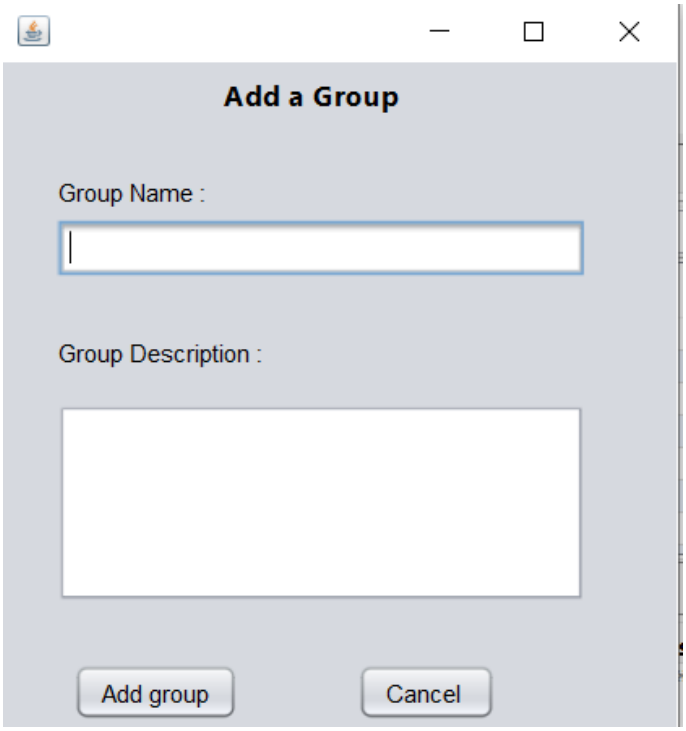
We did the black box testing where we enter different inputs and see the results then compare it to the specifications .

First open the program ,the main interface will be shown .There are four menu panel bars which are Today's ToDo list , Groups ,Tasks and Search .



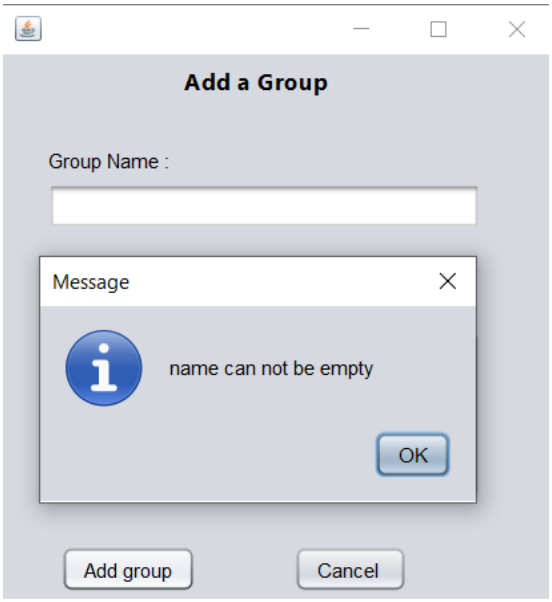
Then the user can use the program to do the following :

1) Create a group : The user should click on the Groups panel then click Add Group button and a new window will appear that asks for group name and description :

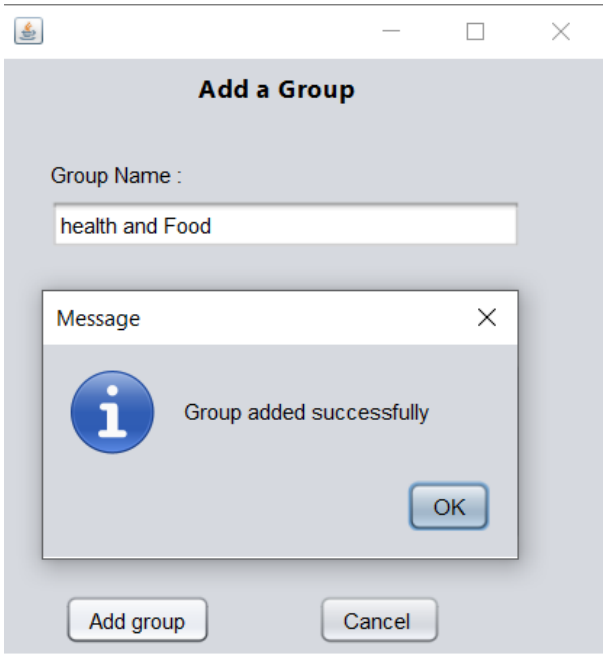


The user has two buttons to add the group or cancel it .

If the user tried to add a group with empty Name an error message should appear :

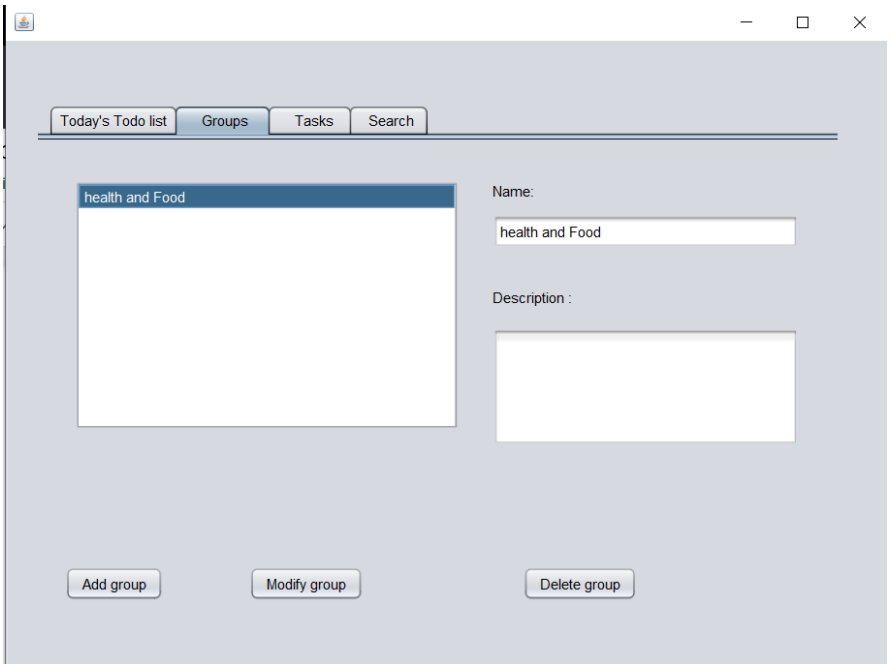


Adding description is optional .When the user clicks Add group button with at least name then a message will appear indicating that the group created successfully in gui and database.



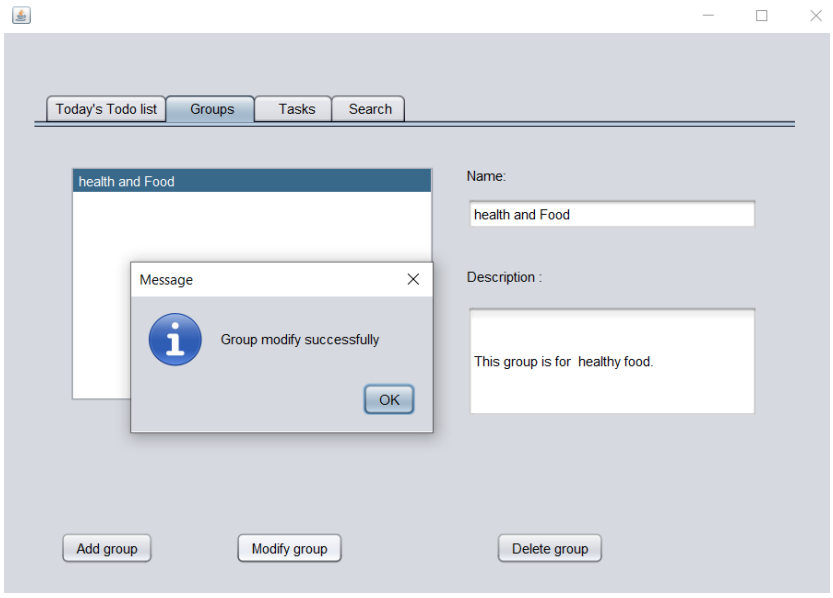
#	ID	NAME	DESCRIPTION
1	0	health and Food	

To view the added group on the GUI the user should go to Groups menu bar :



When the user selects the group Name from groups list it will show the text fields of Name and description corresponding to selected one ,then he has to modify the group or delete it using the buttons.

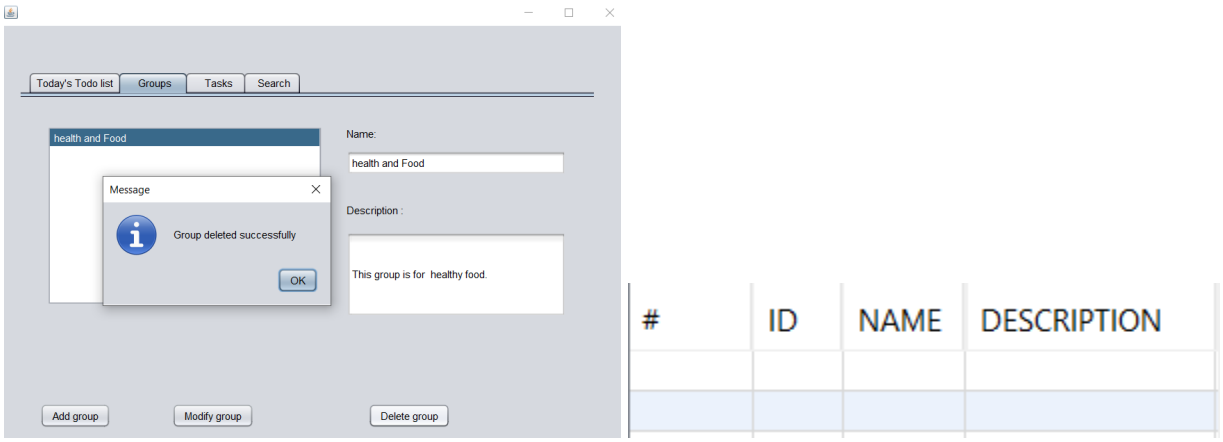
2)Modify the group : The user will select the group from the list then modify the name and the description then click modify group button.The group in the database will be modified too :



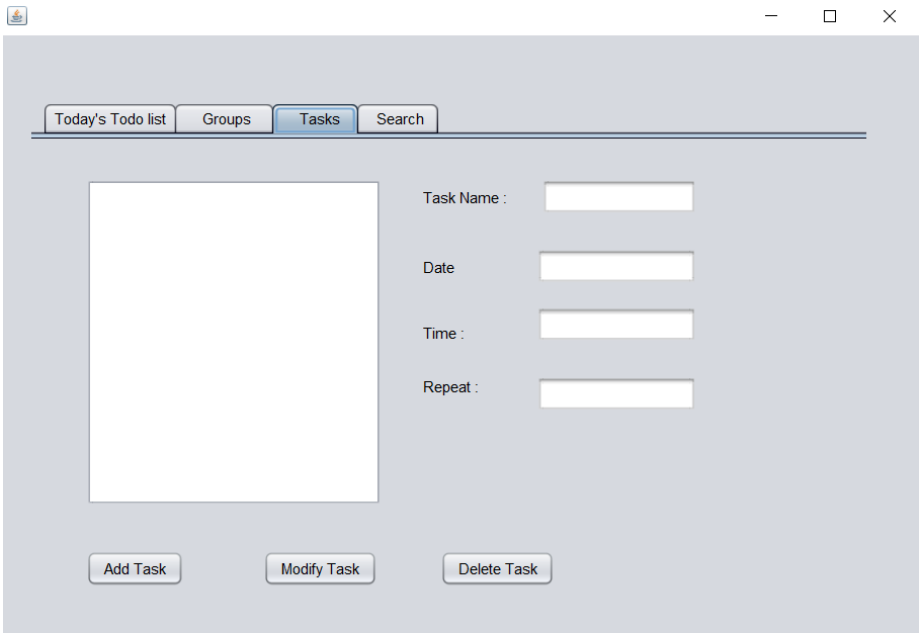
In the database :

#	ID	NAME	DESCRIPTION
1	0	health and Food	This group is for healthy food.

3) Delete selected group: just select the group from the list then click the Delete Group button and it will be deleted in the GUI and the database.

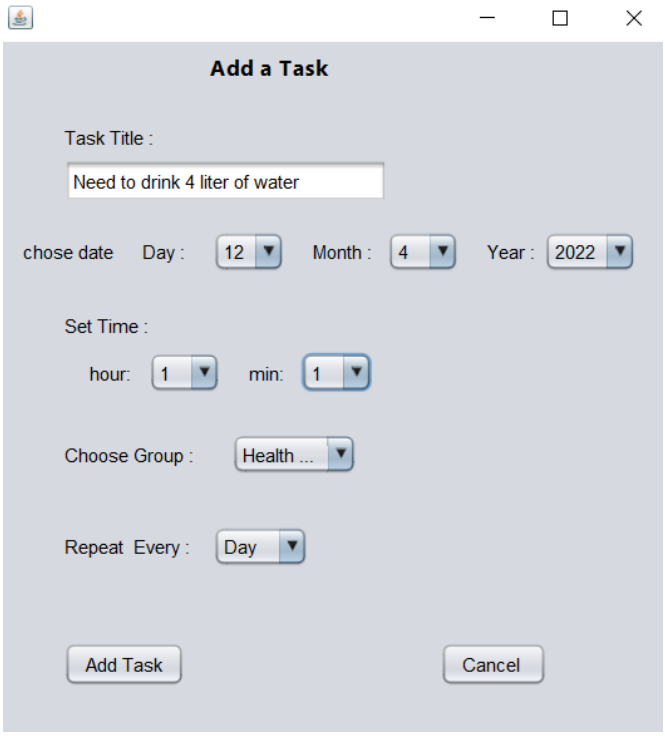


After adding the Group , user have the ability now to add tasks from the tasks panel :

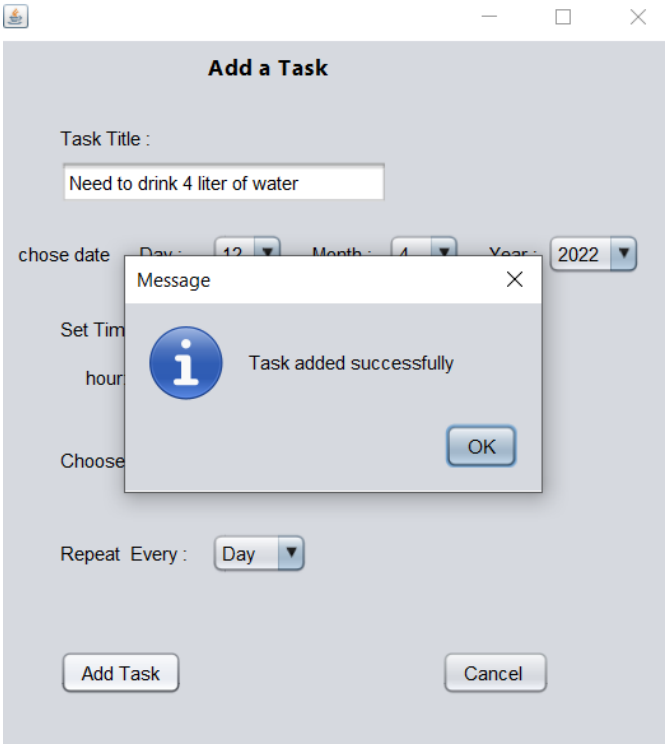


4)Adding tasks: User have to add tasks by pressing the Add task button .

In the Add Task window , User needs to specify The task name , date , time , and if he wants he can relate this task to a group or keep it as none. Also he have a choice to choose if he want to keep this task no repeated , or repeated daily , weekly or monthly.



After adding the task by clicking the add Task button , a window with the task added successfully will appear.



5) Modify and delete Tasks : From the same menu bar panel “Task” users can modify the created tasks or delete the tasks .

All the tasks that will be created will be updated in the database .

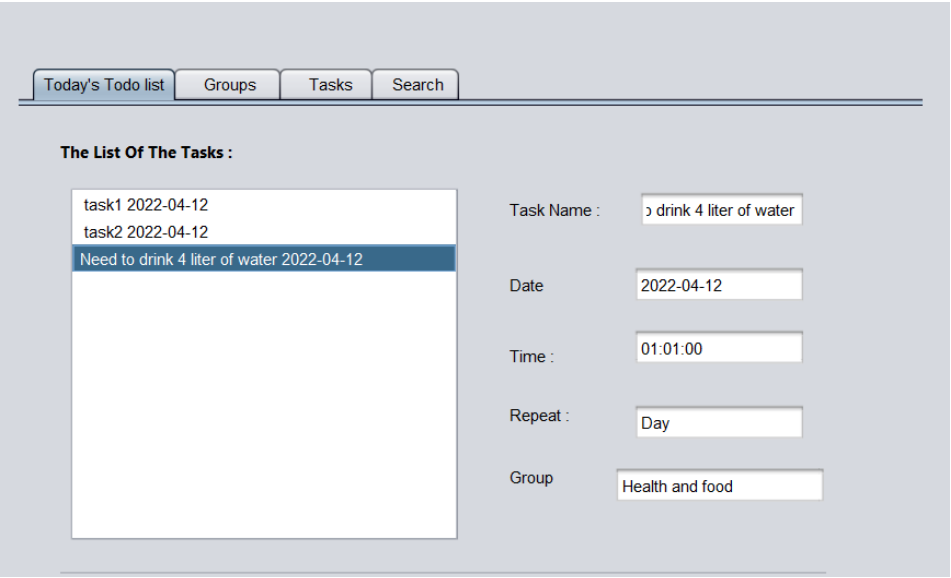
#	TASKID	TITLE	TASKREPEAT	TASKDATE	TASKTIME	GROUPID
▶1	0	task1	<NULL>	2022-04-12	01:01:00	group1
2	1	task2	<NULL>	2022-04-12	01:01:00	group2
3	2	Need to drink 4 liter of water	Day	2022-04-12	01:01:00	Health and food

This is all about the menu bar panel “Task”

After that we have a “Today’s to do list” panel , where it show all the tasks at the same the day, to make it easier to the user to check the tasks that he have in this day.

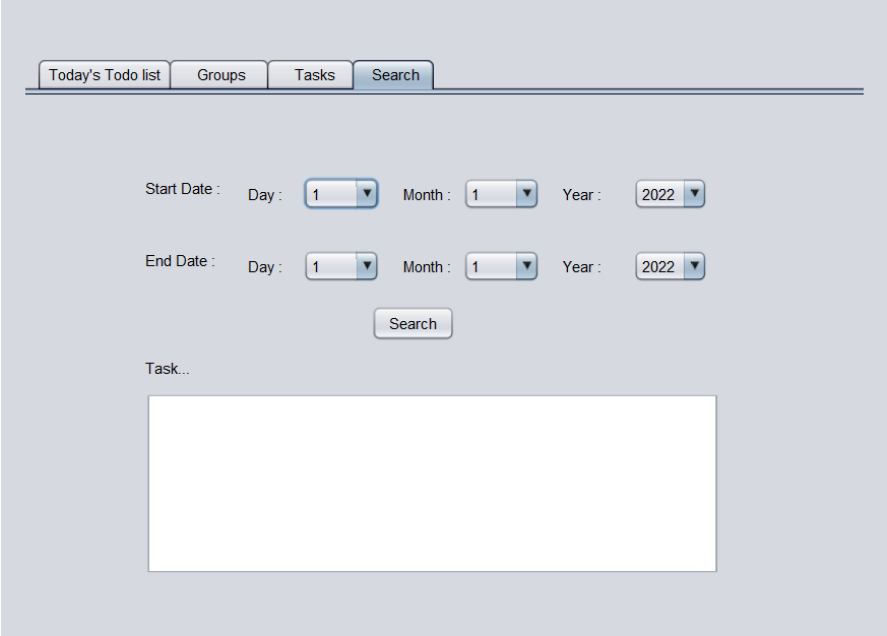
6) Show today's tasks : It will show the list of tasks with all of its details: Name, Date, Time, Repeat and Group.

After clicking the task you want , all of this information will be shown .



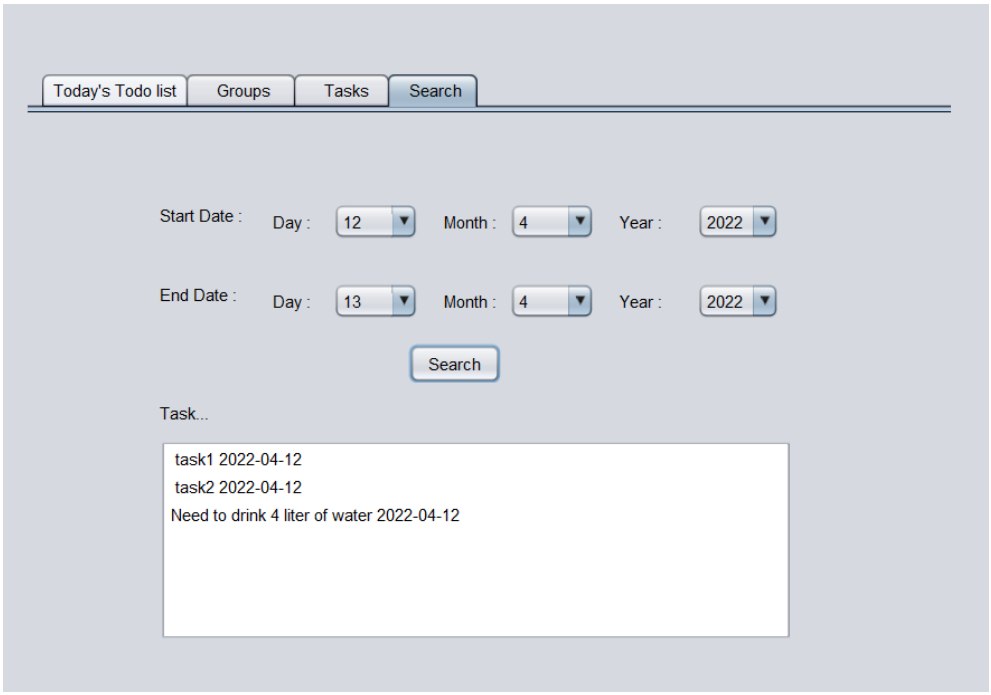
So this panel is all about showing , the user can’t change anything on it .

Lastly , we have a “search” menu bar panel.



7) searching : In this panel as we can see users have to choose the search range that they want , starting with the start day , then the end day , then pressing the search button .

As an example , if we search the tasks from 12 - 13 April 2022 we will have this result :


Today's Todo list
Groups
Tasks
Search
Start Date :
Day :
12
Month :
4
Year :
2022
End Date :
Day :
13
Month :
4
Year :
2022
Search
Task...
task1 2022-04-12
task2 2022-04-12
Need to drink 4 liter of water 2022-04-12

Contribution

Team member	Contribution
Zayana Al Lamki	GUI package , DAO , GUI , Testing , Database package , Core package
Fatma Al Ghafri	GUI package , DAO , GUI , Testing , Database package , Core package
Amna Al Nadabi	GUI package , DAO , GUI , Testing , Database package , Core package