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Subject : Basic of Programming 3

## HW specification ToDoList

### Description

The purpose of this application is task management. A user can store tasks to this todo-list-application, and display them with several views. A user can input "Title of the task", "short description of the task", "Deadline date of the task", "Priority of the task(high, medium, low)", "Category of the task", "status of the task(completed or uncompleted)". The tasks are saved in a file name by serialization. A user can view a task-list from the Display menu bar button, and he/she can choose view mode from 4 options; "Category(this is default)", "Deadline", "Priority," and "Completed tasks." Also, the user can choose recurring events which can decide frequency and until when the user wants to repeat.

### Classes and Functions

Name of the class: Task implements Serializable

Import

```
import java.io.Serializable;  
import java.time.LocalDate;
```

Attributes

```
LocalDate taskDate;  
String taskTitle;  
String taskDescription;  
enum taskPriority{High, Medium, Low};  
String[] taskCategory;  
boolean isDone;
```

Methods

```
Task(String date, String title, String descrip, enum p, String[] category,  
boolean d){//change String → Dates};
```

Name of the class: RecurringEvents extends Task

Attributes

```
LocalDate untilDate; //(Until Y date)  
int frequency; //(Every X days.)
```

Methods

```
RecurringEvents(String date, String title, String descrip, enum p, String[]  
category, boolean d, String until Date, int frequency){//change String → Dates};
```

Name of the class: TaskList

Import

```
import java.util.ArrayList;  
import java.util.Iterator;
```

```
import java.util.List;

Attributes
    private ArrayList list4task <Task> = new ArrayList<Task>();

Methods
    public void addNew(){};
    public void delete(){};
    public void modify(){};
```

Name of the class: Main

```
//This class is for main class,
```

Attributes

Methods

Name of the class: Display

Attributes

```
Task tmp;
```

Methods

```
Display(Task t){};
public void displayCategory(){ }
public void displayDate(){ }
public void displayPriority(){ }
public void displayCompleted(){ }
```

Name of the class: TaskFile

Import

```
java.io.FileOutputStream;
java.io.ObjectOutputStream;
```

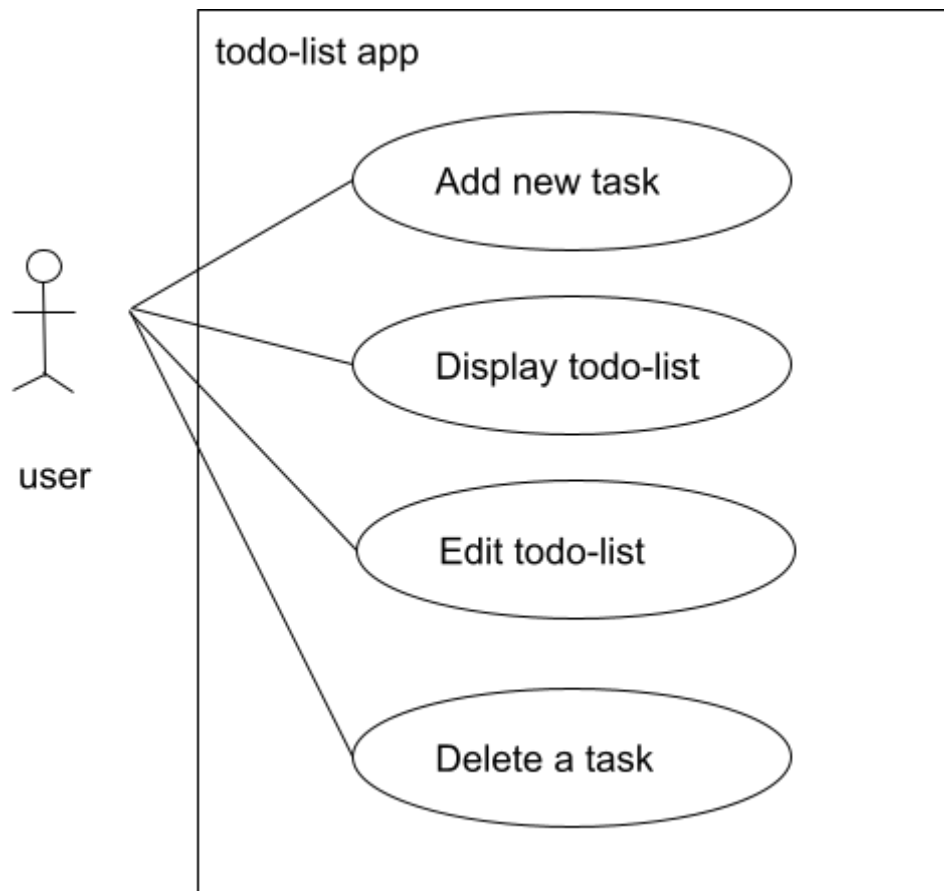
Attributes

```
Task tmp;
```

Methods

```
File(Task t){};
public void serialize(){ };
public void deserialize(){ };
```

## User Case Diagram



# GUI

## Main menu

Menu	Display
<div>category name 1</div>	<div>category name 2</div>
task1	task3
task 2	task4
task3	task5
.	.
.	.
.	.

## Menu bar

Menu	Display
<div>Add new task</div> <div>Edit a task</div> <div>Delete a task</div>	<div>category name 2</div>
task1	task3
task2	task4
task3	task5
.	.
.	.
.	.

Menu

Display

cate

Category-wise  
Date-wise  
Priority-wise  
Completed tasks

category name 2

task1  
task 2  
task3  
.  
.  
.

task3  
task4  
task5  
.  
.  
.

Menu → Add new task → One time

Menu

Display

Task title

Task description

Deadline

Priority

Category

Menu → Add a new task → Recurring

Menu

Display

Task title

Task description

Deadline

Priority

Category

Finish Date

How frequent?

Menu → Edit a task

Menu

Display

Choose the task that you want to edit

category name 1

task1  
task 2  
task3  
.  
.  
.

category name 2

task3  
task4  
task5  
.  
.  
.

Menu → Edit a task → choose the task

Menu

Display

Please edit the task below.

Task title

Task description

Deadline

Priority

Category

Menu → edit task → choose one task

Menu

Display

Task title

Task description

Deadline

Priority

Category

Menu → Delete a task

Menu

Display

Choose the task that you want to delete

category name 1

category name 2

task1  
task 2  
task3  
.  
.  
.

task3  
task4  
task5  
.  
.  
.

After you choose the task that you want to delete

Menu

Display

A task to delete

Task title

Task description

Deadline

Priority

Category



Menu   Display

A task to delete

Task title

Task descr

Deadline

Priority

Category

Are you sure to delete this?

Yes

No

Display

Display → Date order

Menu   Display

Tasks order in deadline

Date task1 ...

Date task 2 ...

Date task3 ...

.

.

.

Display → priority order

Menu

Display

Tasks order in priority

High

task1 ...

task2 ...

Medium

task3 ...

Low

task4...

Display → completed tasks order

Menu

Display

Completed tasks

task1 ...

task 2 ...

task3 ...

.

.

.