

User manual

1. General Introduction

This is a command line interface program which behaves like a task management system, it gives the user ability to manipulate a list of operations for the task management, e.g. create new task, print all the task, edit an existing task, remove a task, save task list, etc. The application is implemented by the Java programming language.

2. Functionalities of the application

The application can be started by running java command with the main entry class, user can do below steps to start up the program:

1. cd to the package folder, for example:

```
cd /Users/tmp-sda-1165/Wei/Java_projects/weiIP/bin
```

2. call the main entry point by java command. (wei.task is the package name, MainEntry is the entry class which contains the static main)

```
java wei.task.MainEntry
```

Now the program will start and below picture should be seen by the user:

```
SDA-36-mbpro:bin tmp-sda-1165$ java wei.task.MainEntry
File: taskList.bin does not exist!
Error when loading configuration file: taskList.bin, error message is: null
*****
>> Welcome to TaskManager
>> You have 0 tasks to do and 0 tasks are done!
>> Pick an option:
>> (1) Show Task List by date
>> (2) Show Task List by project
>> (3) Add a New Task
>> (4) Edit a Task
>> (5) Remove a Task
>> (6) Save
>> (7) Exit
*****
```

Please input the number of your option:

The application will first read the saved task list from file:

testList.bin, the file name is fixed, and it has to be in the same folder as where the user starts the application, if it is the first time for the user to use this program, then there is no such file exists yet, so the console will print out the message: "File: taskList.bin does not exist!", this is OK, the user can just ignore the error, and continue with the usage of the program.

There are several sub options for the user to choose from a list of menus, and user will also get a summary of the current undo tasks and finished tasks as a quick summary, below picture shows where there are several undo tasks in the current task list.

```
*****
>> Welcome to TaskManager
>> You have 2 tasks to do and 0 tasks are done!
>> Pick an option:
>> (1) Show Task List by date
>> (2) Show Task List by project
>> (3) Add a New Task
>> (4) Edit a Task
>> (5) Remove a Task
>> (6) Save
>> (7) Exit
*****
```

Please input the number of your option:

In the next several sections, we will give a details introduction of each menu.

2.1 Show Task List by date

User can show the current lists with this option. when there are tasks, the user will see all the details information of every task in the Task Manager, the task will be sorted by the creation time in a ascending order, below is a picture shows what the output looks like:

Please input the number of your option: 1

task ID: 1
task name: 11
task project: 22
task status: undo
task create time: 2018-10-03 20:26:33
task due time: 2018-10-28 17:07:05

task ID: 2
task name: Steven
task project: sdfj
task status: undo
task create time: 2018-10-08 00:05:25
task due time: 2018-10-28 17:07:05

task ID: 3
task name: New Task
task project: sdfj
task status: undo
task create time: 2018-10-09 23:16:42
task due time: 2018-10-20 17:00:00

2.2 Show Task List by project

This will also print the task, but instead of print all the task, it will asks the user for a project name to filter, and then only print all the tasks which belongs to the same project which is specified by the user. Below picture shows how the result should look like:

```

*****

Please input the number of your option: 2
Please input the project name you want to filter: sdfj
-----
task ID: 2
task name: Steven
task project: sdfj
task status: undo
task create time: 2018-10-08 00:05:25
task due time: 2018-10-28 17:07:05
-----

-----

task ID: 3
task name: New Task
task project: sdfj
task status: undo
task create time: 2018-10-09 23:16:42
task due time: 2018-10-20 17:00:00
-----

```

```

*****

```

2.3 Add a New Task

User can add new task to the Task manager by enter this option, there are several inputs (e.g. task name, project name, due time of the task) need to be given by the user in order to add a new Task, the program will print the hint information for the user to input the necessary information one by one.

```

*****

Please input the number of your option: 3
Please input task name: My New Task
The current available project names are: 22, sdfj
Please input project name: 22
Please input due time, format like "2018-09-28 17:07:05": 2018-10-22 18:00:00
*****

```

When the program asking the user for the input of the project name, it will print all the available project names, and the user can decide if he wants to use the existing one or use a new project name.

2.4 Edit a Task

The user can choose to edit an existing task in this menu, it will ask the user for the task id which the user wants to edit, and then ask the user to edit the task information by given useful hint information, an example is shown below:

```
*****
```

```
Please input the number of your option: 4
Please input the task ID you want to edit: 3
Do you want to edit task name? yes/no: yes
Please input task name: Change Task Name
Do you want to edit project name? yes/no: no
Do you want to edit task status? yes/no: yes
Please input status. undo/done : done
Do you want to edit due time? yes/no: no
```

```
*****
```

For each task property, the user can choose to edit it or not, in the example above, the user only choose to edit the task name and task status of the task.

2.5 Remove a Task

User can also choose to remove an existing task, to do so, he needs to give the task id information about which task he wants to remove from the Task Manager, below shows how this is done with the program:

```
*****
```

```
Please input the number of your option: 5
Please input the task ID which you want to remove: 2
*****
>> Welcome to TaskManager
>> You have 2 tasks to do and 1 tasks are done!
```

2.6 Save

The user can choose to save the current Task Manager status to the binary file at any time by choosing this command. The program will take a snapshot of the current task list, and save all the tasks to the binary file.

2.7 Exit from the program

The program will run continuously and asking for the user to give a command to execute until the user choose this command to decide to leave the program. When this is done, program will print the

goodbye message, and then save the current task to the binary file, and then exit from the program.

```
Please input the number of your option: 5
Please input the task ID which you want to remove: 2
*****
>> Welcome to TaskManager
>> You have 2 tasks to do and 1 tasks are done!
>> Pick an option:
>> (1) Show Task List by date
>> (2) Show Task List by project
>> (3) Add a New Task
>> (4) Edit a Task
>> (5) Remove a Task
>> (6) Save
>> (7) Exit
*****

Please input the number of your option: 7
Thank you for coming, Bye!
SDA-36-mbpro:weiIP tmp-sda-1165$
```

3. Error handling

Since this is a command line interface program, and it needs to interact with the user through the keyboard input, there can be invalid input from the user accidentally: e.g. incorrect format of the time information, an empty string for the task name, project name, or invalid task id which does not exist. The program is designed to handle all of those error elegantly, it will give user error message whenever it is possible and necessary. Here are a part of the error handling implemented in the program.

3.1 Invalid command options.

When the program waits for the user to give a proper command selection, if the user input any range which is not exist, the program will prompt an error message, and ask the user to input again. Below is an example of this kind of error:

Please input the number of your option: 0

This is not a valid option, please input 1 ~ 7.

>> Welcome to TaskManager

>> You have 2 tasks to do and 1 tasks are done!

>> Pick an option:

>> (1) Show Task List by date

>> (2) Show Task List by project

>> (3) Add a New Task

>> (4) Edit a Task

>> (5) Remove a Task

>> (6) Save

>> (7) Exit

Please input the number of your option: █

3.2 When expecting an integer

The program needs to read a integer from the user at many places in this program, e.g. command option, task id, etc. whenever this happen, if the user given any incorrect value, the program will print an error message, and continue to ask the input to input a valid integer.

Please input the number of your option: df

You must input an integer!

Please input the number of your option:

df

You must input an integer!

Please input the number of your option: █

3.3 When input a task id which is not exist.

Depends on the operation, when a task id is given by the user, but there is no Task found with this task id, the program may have different way of handling this situations, for example, the program will do nothing if the user choose to remove a Task with the non-

exist task id, but only choose to print a message which tells the user there is no such task exist with the given task id value.

```
Please input the task ID which you want to remove: 56
there is no such a task
```

```
*****
```

```
>> Welcome to TaskManager
>> You have 2 tasks to do and 1 tasks are done!
>> Pick an option:
>> (1) Show Task List by date
>> (2) Show Task List by project
```

3.4 Incorrect task name or project name

When the user input an incorrect task name or project name (e.g. empty string), the program will print the error message and ask the user to input again, below is an example of how the program handle this kind of error.

```
*****
```

```
Please input the number of your option: 3
Please input task name:
Task name can not be empty!
Please input task name: 
```

3.5 Incorrect format of the time information

Although the program gives hints of how an valid time string format is expected from the user, but there still exist possibility that the user might give an incorrect format string for the time information. Similarly like above, the program will give the user error information message, and ask for a valid input from the user continuously. Here is an example of showing this.

```
Please input the number of your option: 3
Please input task name:
Task name can not be empty!
Please input task name: Come to home
The current available project names are: 22, sdfj
Please input project name: HomeJob
Please input due time, format like "2018-09-28 17:07:05": 2018-12-12 32123-213
Due time format is invalid!
Please input due time, format like "2018-09-28 17:07:05": 
```

4. Report of a bug

If you see any bug by using this program, please report an error to the author: **Wei Wang** (vivi666.wang@gmail.com).