Crit B Design Overview
Word Count: 469

<u>Class Diagram:</u>

Task

taskName: String

typeOfContact: String

taskLocation: String

taskGroup: String

taskUrgency: Boolean

daysLeft: int

timeAllocated: int

percentLeft: int

percentComplete: int

timeLeft: int

+ task

+ setPercentLeft (percentLeft: int)
+ setPercentComplete (percentComplete: int)
+ setTimeLeft (timeLeft: int (percentComplete * timeAllocated)
+ setTask (taskName: String)
+ setTaskGroup (taskGroup: String)
+ setTypeOfContact (typeOfContact: String)
+ setDaysLeft (daysLeft: int)
+ setTimeAllocated (timeAllocated: int)

+ getPercentLeft (percentLeft: int)
+ getPercentComplete (percentComplete: int)
+ getTimeLeft (timeLeft: int (percentComplete * timeAllocated)
+ getTask (taskName: String)
+ getTaskGroup (taskGroup: String)
+ getTypeOfContact (typeOfContact: String)
+ getDaysLeft (daysLeft: int)
+ getTimeAllocated (timeAllocated: int)

Uses

Text

Uses

Daily Schedule Updater

Super (Task)

+ task

+ setPercentLeft (percentLeft: int)
+ setPercentComplete (percentComplete: int)
+ setTimeLeft (timeLeft: int (percentComplete * timeAllocated)
+ setTask (taskName: String)
+ setTaskGroup (taskGroup: String)
+ setTypeOfContact (typeOfContact: String)
+ setDaysLeft (daysLeft: int)
+ setTimeAllocated (timeAllocated: int)

+ getPercentLeft (percentLeft: int)
+ getPercentComplete (percentComplete: int)
+ getTimeLeft (timeLeft: int (percentComplete * timeAllocated)
+ getTask (taskName: String)
+ getTaskGroup (taskGroup: String)
+ getTypeOfContact (typeOfContact: String)
+ getDaysLeft (daysLeft: int)
+ getTimeAllocated (timeAllocated: int)

Schedule of All Tasts

Super (Task)

+ task

+ getPercentLeft (percentLeft: int)
+ getPercentComplete (percentComplete: int)
+ getTimeLeft (timeLeft: int (percentComplete * timeAllocated)
+ getTask (taskName: String)
+ getTaskGroup (taskGroup: String)
+ getTypeOfContact (typeOfContact: String)
+ getDaysLeft (daysLeft: int)
+ getTimeAllocated (timeAllocated: int)

All About Inputs

Input	Data Type	Normal Example	Border	Extreme	Wrong Type
taskName	String	"Meeting" "Investment" "Spreadsheet"	More than X chars		4 Words forgetting " "
taskGroup	String	"Bank" "Farm" "Specific Name"	More than X chars		45 Words forgetting " "
taskLocation	String	"Europe" "Shanghai" "Finland"	More than X chars		6 Words forgetting " "
timeAllocated	int (has to be minutes not hours)	90 15			3 hours 45 minutes

3 (as in hours) |
daysLeft	int (measured in days)	1 4	Anything more than 5 (		
timeLeft	Int (has to be minutes not hours)	45 30	timeLeft<5, will work but perhaps no need to remind him if the time left is that low.		Any hour measurement
percentLeft	int	77 45	percentLeft == 100		percentLeft > 100
typeOfContact	String	"Weekly" "Monthly" "Daily"	"Every 3 days"

More than X chars | | |
| meeting reminder | String | "You have a meeting with " + name | More than X chars | | |

partnerName	String	"Phil" "Mark"	More than X chars		
sleepingInvestor	boolean	true/false			yes
percentComplete	Int **(use modulus because he doesn't really need to know if its 50.9 or 51 for example, wastes processing)**	50 61 **Note: Int + " percent of this task left**	0		40.7
totalTaskCompletion	Int **(use modulus because he doesn't really need to know if its 50.9 or 51 for example, wastes processing)**	50 61 **Note: Int + " percent of this task left**	0		55.3
finished	boolean	true/false			
taskUrgency	boolean	true/false			no

Action To Test	Method of Testing/Expected Result
Allow the saving of tasks	Create a task, input it, close and reopen the database to see whether or not the task saved.
Check that tasks inputted stay in the database	Create a task, input it, and use the refresh button to double check that it is still there.
Percentage of task complete is shown	Create 5-6 tasks, click 'Percentage Complete' button and check that it displays the percentage.

Database is not sensitive to capital/lowercase	Input the same task in lowercase and uppercase, and see if it still functions the same way/recognizes them as the same task. *Troubleshoot in programming (toUpperCase/toLowerCase) - Finland = finland, for instance
Multiple choices can be selected in a drop-down box	Use Jcheckbox - multiple tasks should be able to be selected for instance.
Tasks are able to be removed when finished	Make a remove/delete button that allows the client to click on and delete a task from the main database - use refresh button to verify if it is removed.

Flowcharts:

Inputting Information Flow Chart

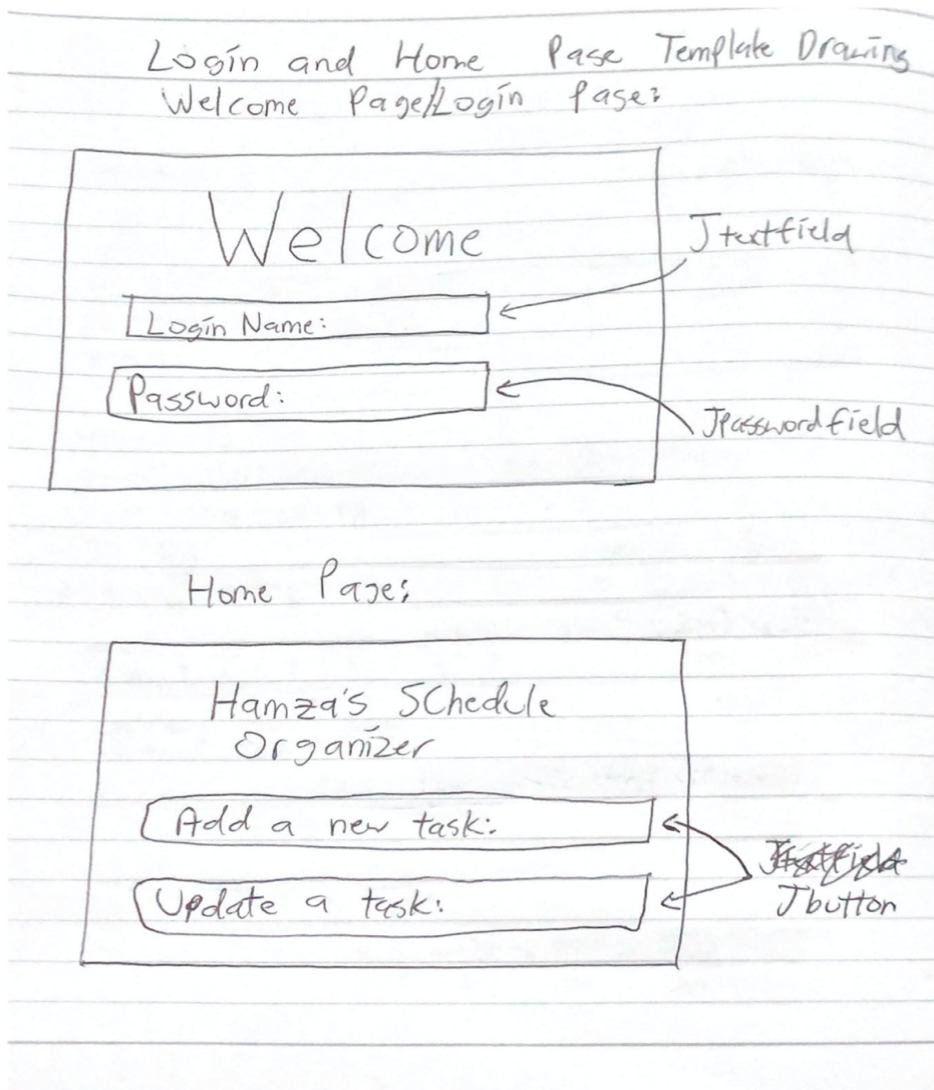Inputting a Task Flowchart
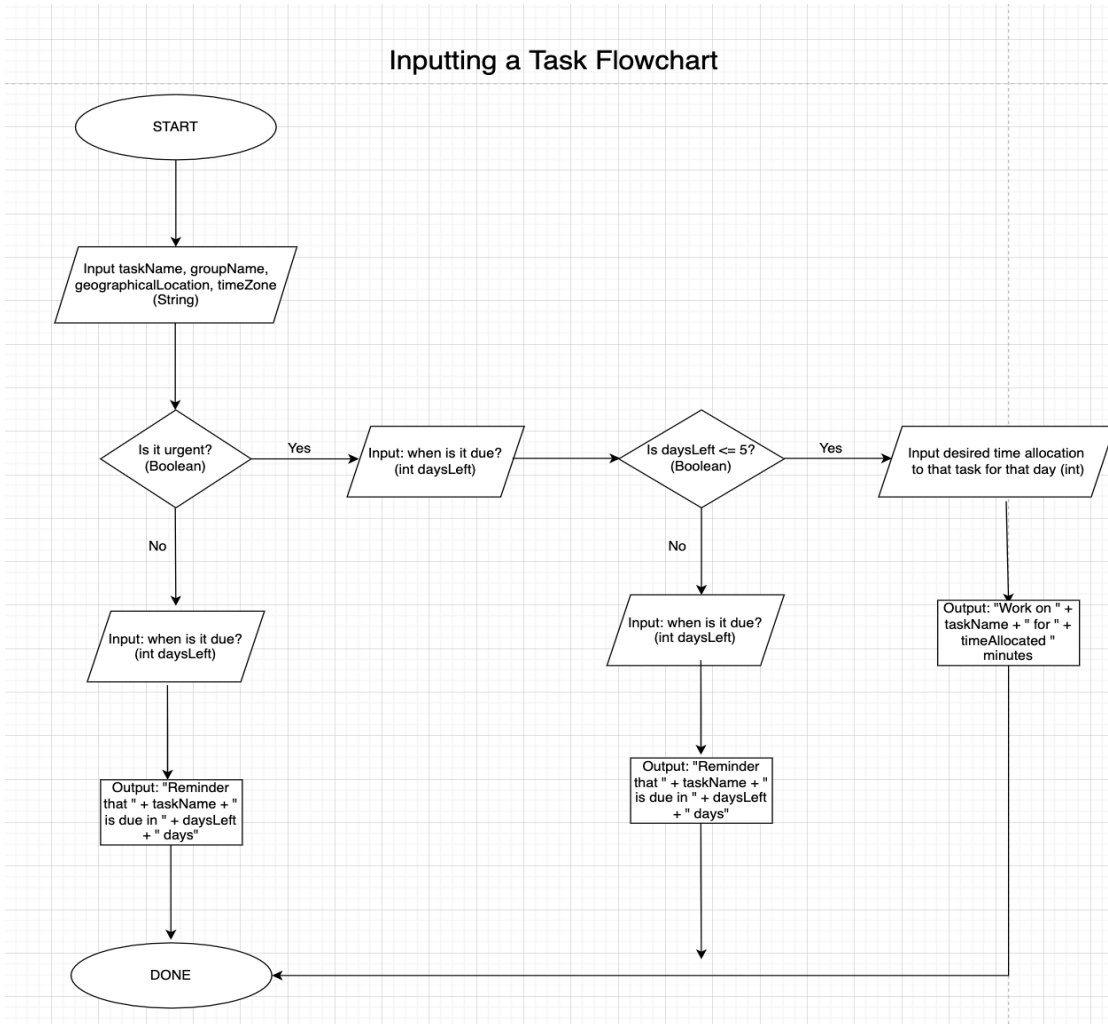
Updating Completion Flowchart:

Updating Task Completion Flowchart

```
                    START
                      │
                      ▼
              Input previous task
                (inheritance)
                      │
                      ▼
         Is the task complete?  ──No──▶  How much of the task is complete  ──▶  Calculate percentLeft
              (Boolean)                     (double, percentComplete)              (double, 1 - percentComplete)
                      │                                                                      │
                     Yes                                                                     │
                      │                                                                      ▼
                      ▼                                                           Calculate and display timeLeft
                    DONE  ◀─────────────────────────────────────────────────────  (int, percentLeft * timeAllocation)
```
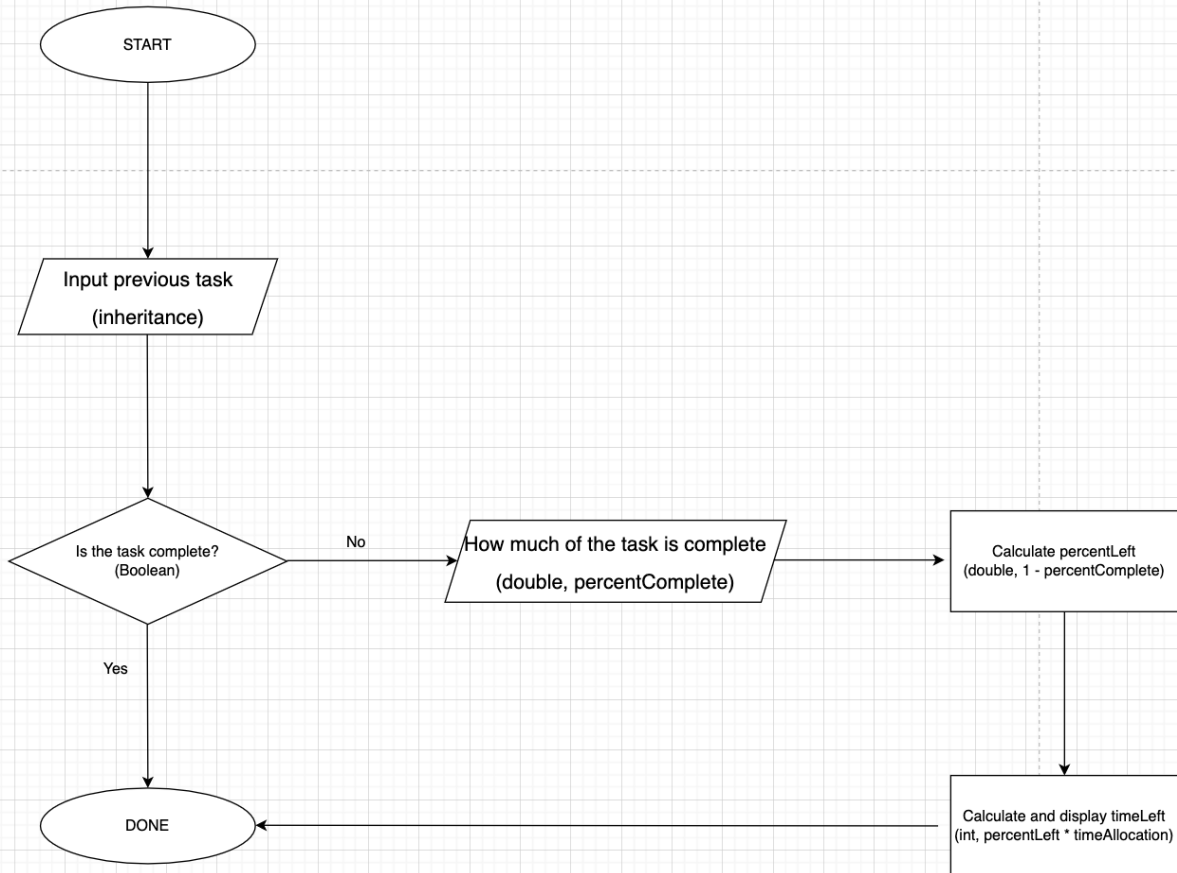
Removing Finished Tasks Flowchart

START

Input previous task (inheritance)

Is the task finished?
(Boolean)

No → Output "ERROR. Task not complete"

Yes

removeTask
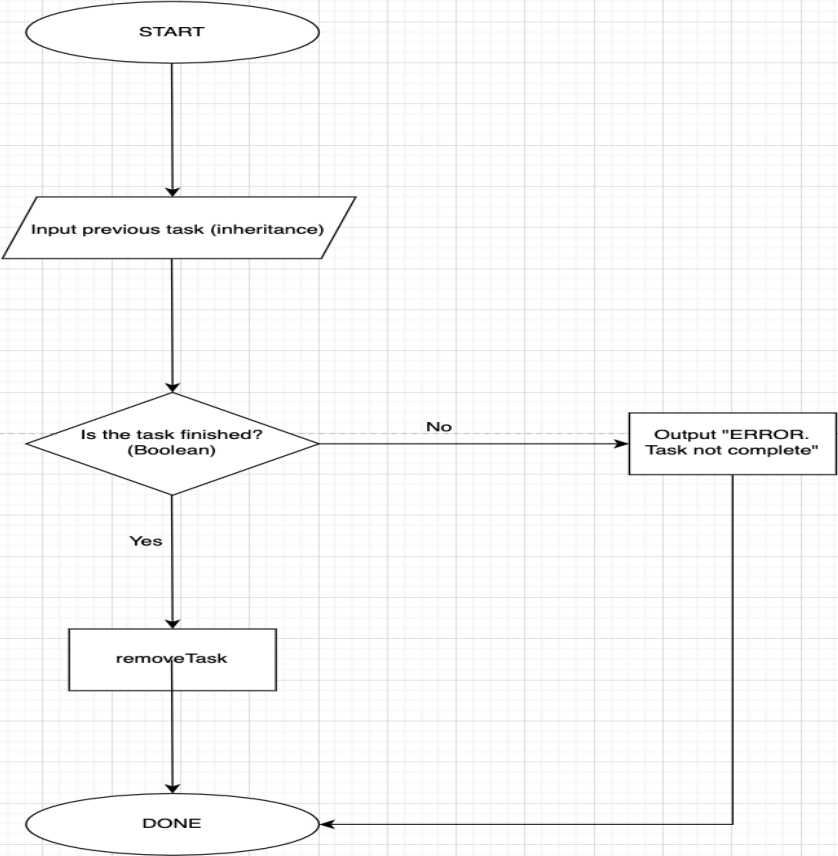
DONE

<u>Database Sketch Outlines:</u>

Login and Homepage Template Drawing:

Things done on this tab:
- Login Page:
    - Enters username as well as Jpasswordfield protected password - for security reasons as client works with private data of different companies.
- Hamza's Schedule Organizer:
    - Simply allows client to choose whether they want to add or update a task.

GUI Component Justification:
- JTextField used for 'Login Name' because it enables the user to type a small amount of text - their username.

- JPasswordField is used to protect the private password of the client by not displaying it on the screen, instead displaying it as '****', for instance.
- JButton allows client to simply click on whether he wants to add a new task or update a task.

Adding Tasks Page Sketch Drawing:

Adding Tasks Page

Adding tasks (task class):

task name: ← J text field

task location:
| Finland | ← Jcombobox
| Dubai |
| Moraco |
| other |

Is it urgent?
| yes | ← Jcombobox
| no |

Contected person/group: ← J textfield

time left (days): ← J text field

~~How long will you work today:~~ J text field

How long will you work today? ←

<u>Things done on this tab:</u>
- Inputs of the specific information and attributes of each object (task) being inputted by the client.
    - Attributes such as task name, group, location and if it is urgent.

<u>GUI Component Justification:</u>
- JTextField used for 'Login Name' because it enables the user to type a small amount of text - their username.
- JComboBox used because the user only needs to, and only can, select one option in task location and urgency, thus making it more appropriate than a check box, for example.

Total Schedule/Schedule Updater Drawing/Sketch:
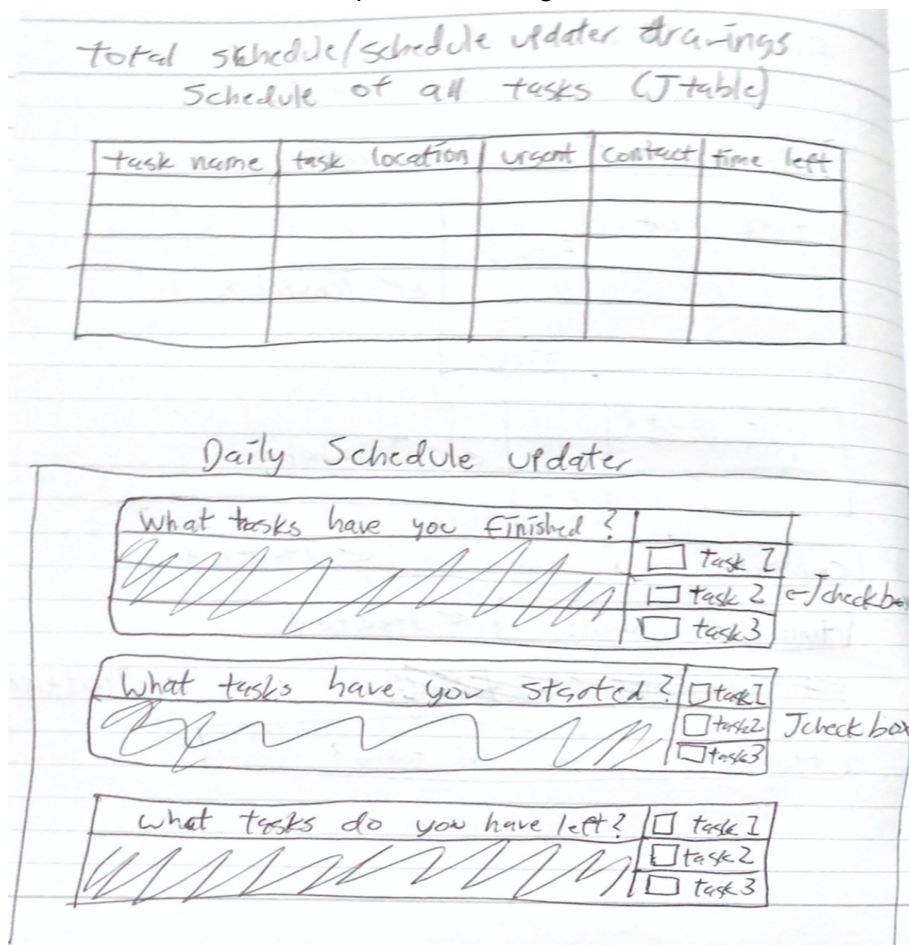
<u>Things done on this tab:</u>
- Schedule:
    - Allows a one-in-all place for client to see his tasks layed out.
    - Will be sorted alphabetically.

- Can be categorized by urgency (urgent/not urgent)
- Daily Schedule Updater:
    - Allows client to separate tasks into three categories: finished, started and not yet started tasks. This allows the client to see what he has to still work on clearer.

GUI Component Justification:
- JTable allows display of tables of data, needed because each task has multiple pieces of information that help organize it in terms of what to do, when to do, and for whom to do each task.
- JCheckBox used in the daily schedule updater because here the user needs the ability to select multiple tasks in some instances, thus making a JComboBox inappropriate for the actions on this tab.