

Course Instructor: Cristina Ruiz Martin



Carleton
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Developer Manual

**Advance Topics in Software Engineering: Software
Development in C**

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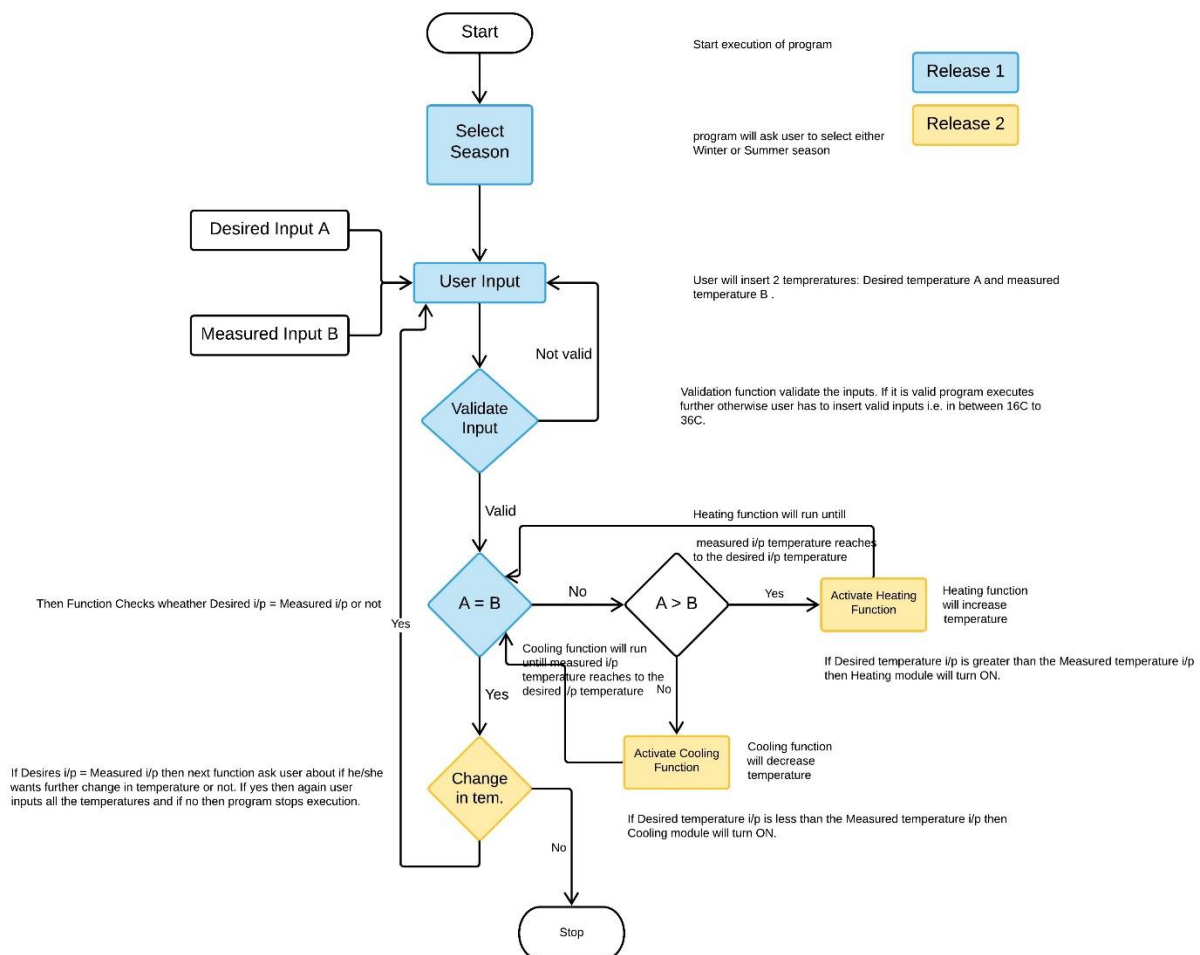
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Problem statement

A home temperature control system maintains room temperature in all seasons. The temperatures can be changed by the user as per the requirements once simulation gets completed.

When the system is "on", the controller gets a reading of the room temperature. The measured temperature is compared to the desired temperature. If the measured temperature does not match with the desired temperature, then the system (heating or cooling) will turn on. When the house no longer requires change in temperature i.e., the measured value is equal to the desired value, then it will prompt user to ask again if he wants to change temperature or not. If he does not want further to change in temperature program will stop execution at that point. If he wants to change then he can set his different desire temperature and algorithm will start working again.

Flow Chart

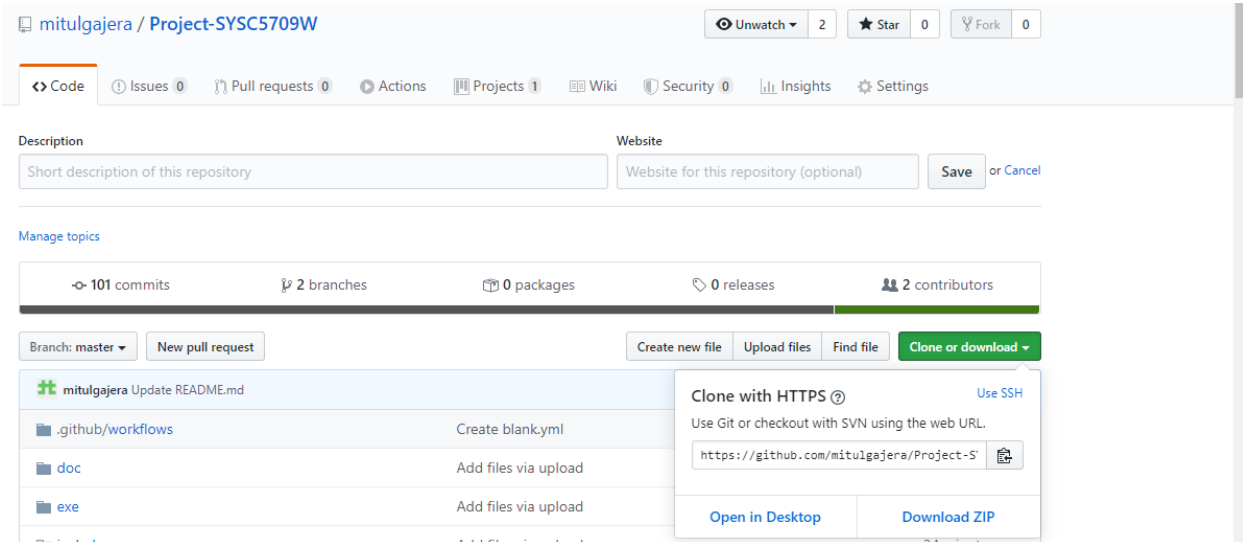


File and Folder Structure Organization

1. doc: This folder has documentation files of the project.
 - Assignment 2.pdf
 - Assignment.pdf
 - Flowchart_updated_1.jpg
 - GroupH_Home temperature controller system.docx
 - GroupH_Home temperature controller system_update.pdf
2. exe: This folder has executable file of the project.
 - main_1.exe
3. include: This folder has the all the header files used in the project.
 - checkTemperature.h
 - heatingSystem.h
 - needHeatOrCold.h
 - printNewTempMsg.h
 - printTaskDoneMsg.h
 - startCooling.h
 - startHeating.h
 - tempChangeWaitDelay.h
 - validateIntegerInput.h
4. src: This folder contains the source code for the message and top model.
 - checkTemperature.c
 - heatingSystem.c
 - needHeatOrCold.c
 - printNewTempMsg.c
 - printTaskDoneMsg.c
 - startCooling.c
 - startHeating.c
 - tempChangeWaitDelay.c
 - validateIntegerInput.c

Downloading Project_SYSC5709W

1. Direct Download from git-hub repository:



2. Clone with git-bash:

- Go to git-bash and type command: `https://github.com/mitulgajera/Project-SYSC5709W.git`

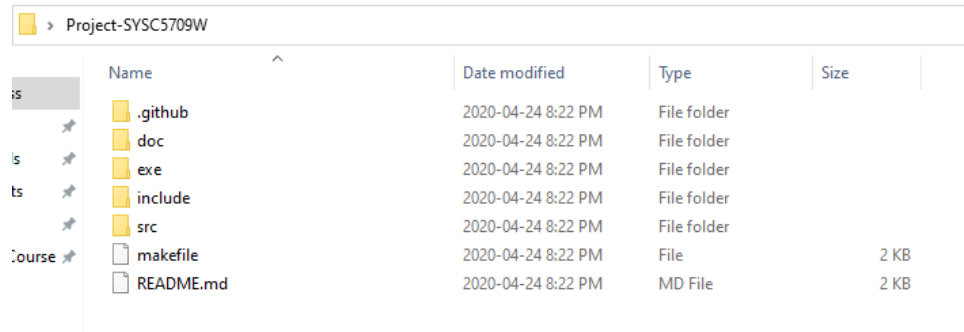
```
MINGW64:/c:/Users/Mitul/Desktop
Mitul@silentknight MINGW64 ~
$ cd Desktop/

Mitul@silentknight MINGW64 ~/Desktop
$ git clone https://github.com/mitulgajera/Project-SYSC5709W.git
Cloning into 'Project-SYSC5709W'...
remote: Enumerating objects: 28, done.
remote: Counting objects: 100% (28/28), done.
remote: Compressing objects: 100% (27/27), done.
remote: Total 400 (delta 12), reused 0 (delta 0), pack-reused 372
Receiving objects: 100% (400/400), 1.56 MiB | 3.02 MiB/s, done.
Resolving deltas: 100% (205/205), done.

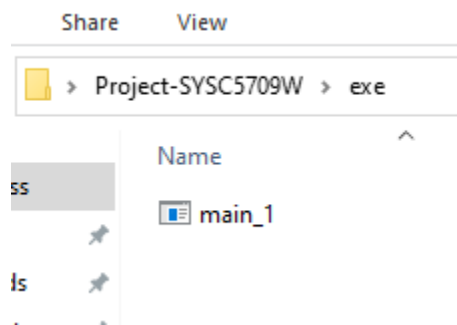
Mitul@silentknight MINGW64 ~/Desktop
$ |
```

Execute file project file

Go to desktop and open folder Project_SYSC5709W.



Open folder exe and execute file main_1.exe.



GIT-HUB LINK: <https://github.com/mitulgajera/Project-SYSC5709W.git>