Java Time! Weekly Planner

A Road Map of My Development Cycle

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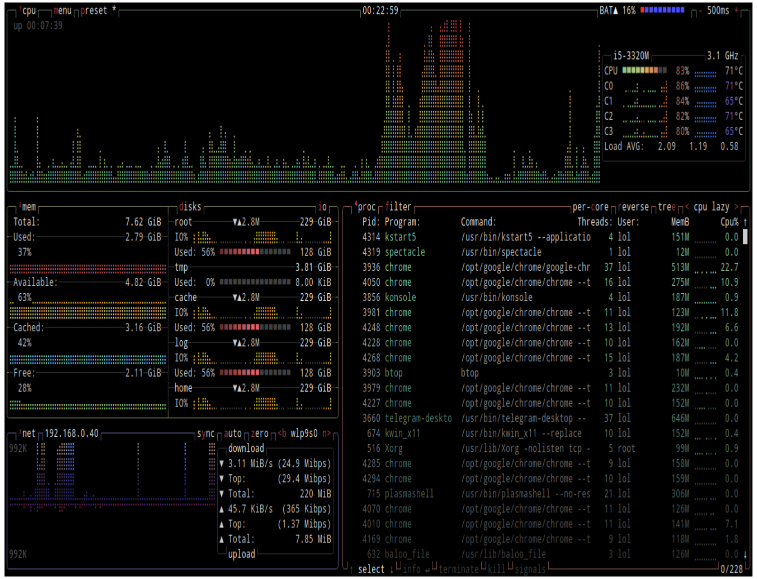
The Idea

- I wanted to create a week at a glance planner without the distractions of Google or The Internet. This idea resonated with me due to my ADHD tendencies.
- I also wanted to bring some Bash/DOS designs to my program to pay homage.
- I wanted to do something new rather than adding onto an old program

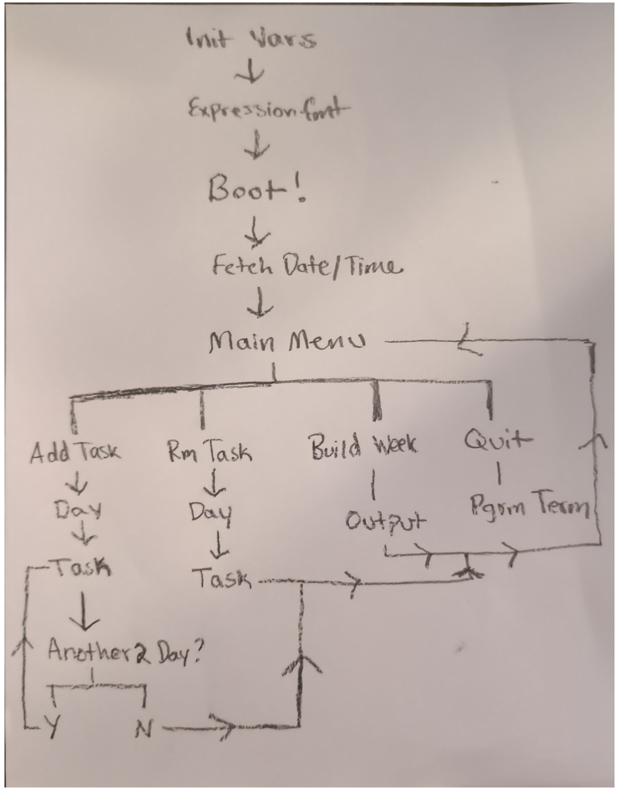


```
cpu  menu  preset *                 00:22:59                  BAT▲ 16%          - 500ms +
up 00:07:39
                                                              i5-3320M            3.1 GHz
                                                              CPU          83%       71°C
                                                              C0           86%       71°C
                                                              C1           84%       65°C
                                                              C2           82%       71°C
                                                              C3           80%       65°C
                                                              Load AVG:   2.09   1.19   0.58

mem                     disks                      io   proc  filter            per-core  reverse  tree  < cpu lazy >
Total:        7.62 GiB  root        ▼▲2.8M    229 GiB     Pid: Program:         Command:                       Threads: User:   MemB   Cpu%
Used:         2.79 GiB  IO%                                4314 kstart5          /usr/bin/kstart5 --applicatio   4 lol    151M    0.0
 37%                    Used: 56%             128 GiB     4319 spectacle        /usr/bin/spectacle              1 lol     12M    0.0
                        tmp                  3.81 GiB     3936 chrome           /opt/google/chrome/google-chr  37 lol    513M   22.7
Available:    4.82 GiB  Used:  0%            8.00 KiB     4050 chrome           /opt/google/chrome/chrome --t  16 lol    275M   10.9
 63%                    cache       ▼▲2.8M    229 GiB     3856 konsole          /usr/bin/konsole                4 lol    187M    0.9
                        IO%                                3981 chrome           /opt/google/chrome/chrome --t  11 lol    123M   11.8
Cached:       3.16 GiB  Used: 56%             128 GiB     4248 chrome           /opt/google/chrome/chrome --t  13 lol    192M    6.6
 42%                    log         ▼▲2.8M    229 GiB     4228 chrome           /opt/google/chrome/chrome --t  10 lol    162M    0.0
                        IO%                                4268 chrome           /opt/google/chrome/chrome --t  15 lol    187M    4.2
Free:         2.11 GiB  Used: 56%             128 GiB     3903 btop             btop                            3 lol     10M    0.4
 28%                    home        ▼▲2.8M    229 GiB     3979 chrome           /opt/google/chrome/chrome --t  11 lol    232M    0.0
                        IO%                                4227 chrome           /opt/google/chrome/chrome --t  10 lol    152M    0.0
                                                           3660 telegram-deskto  /usr/bin/telegram-desktop --   37 lol    646M    0.0
net  192.168.0.40        sync  auto  zero  <b wlp9s0 n>     674 kwin_x11         /usr/bin/kwin_x11 --replace    10 lol    152M    0.4
992K                     download                            516 Xorg             /usr/lib/Xorg -nolisten tcp -   5 root    99M    0.9
                         ▼ 3.11 MiB/s  (24.9 Mibps)         4285 chrome           /opt/google/chrome/chrome --t   9 lol    158M    0.0
                         ▼ Top:        (29.4 Mibps)         4294 chrome           /opt/google/chrome/chrome --t  10 lol    159M    0.0
                         ▼ Total:          220 MiB           715 plasmashell      /usr/bin/plasmashell --no-res  21 lol    306M    0.0
                         ▲ 45.7 KiB/s   (365 Kibps)         4070 chrome           /opt/google/chrome/chrome --t  11 lol    126M    0.0
                         ▲ Top:        (1.37 Mibps)         4010 chrome           /opt/google/chrome/chrome --t  11 lol    141M    7.1
                         ▲ Total:         7.85 MiB          4169 chrome           /opt/google/chrome/chrome --t   9 lol    118M    1.8
992K                     upload                              632 baloo_file       /usr/lib/baloo_file             3 lol    126M    0.0
                                                          ↑ select ↓  info ↵  terminate  kill  signals                          0/228
```

BTOP: A Unix Terminal Task-Manager

General Structure

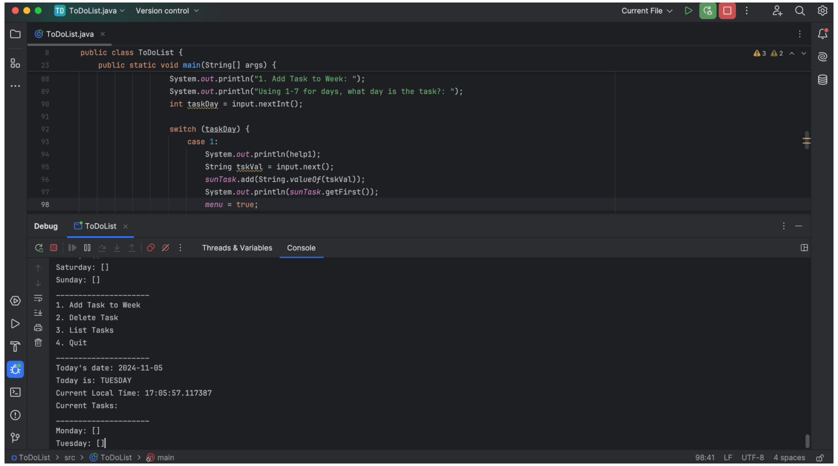
- Attached is a flow chart of how the program is supposed to work
- This is a basic overview and doesn't include my error handling functions
- Helped me direct my focus towards my vision



Debugging The Program

- I did my debugging by doing passes through each function as it was implemented
- Had the advantage of moving quicker to roll out changes but made each code change very messy and super different
- I have included snapshots of raw code at different times, if you want a full view perhaps not captured by the buggy file please look
- Certain Implementation ideas do not persist through the file versions as they were replaced with better algorithms
- I used a focus group of 3 people to help me make the UI easy to use

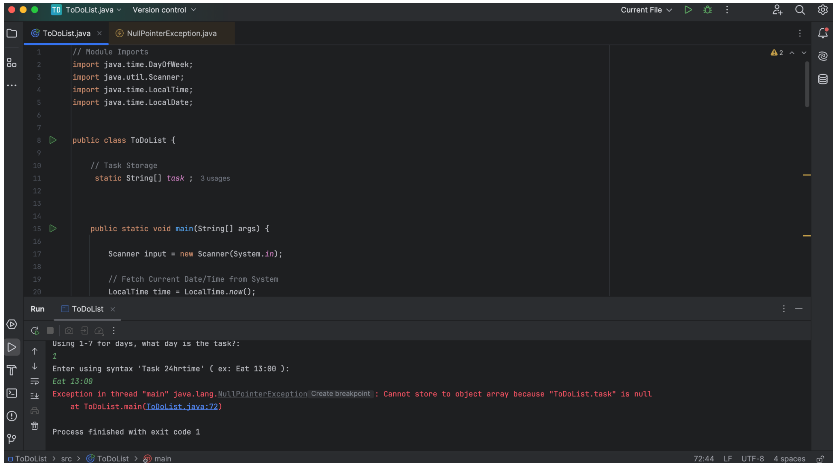
Bug Hall of Fame



```java
public class ToDoList {
    public static void main(String[] args) {
                System.out.println("1. Add Task to Week: ");
                System.out.println("Using 1-7 for days, what day is the task?: ");
                int taskDay = input.nextInt();

                switch (taskDay) {
                    case 1:
                        System.out.println(help1);
                        String tskVal = input.next();
                        sunTask.add(String.valueOf(tskVal));
                        System.out.println(sunTask.getFirst());
                        menu = true;
```

```
Saturday: []
Sunday: []
---------------------
1. Add Task to Week
2. Delete Task
3. List Tasks
4. Quit
---------------------
Today's date: 2024-11-05
Today is: TUESDAY
Current Local Time: 17:05:57.117387
Current Tasks:
---------------------
Monday: []
Tuesday: []
```

Endless BootLoop (Logic)

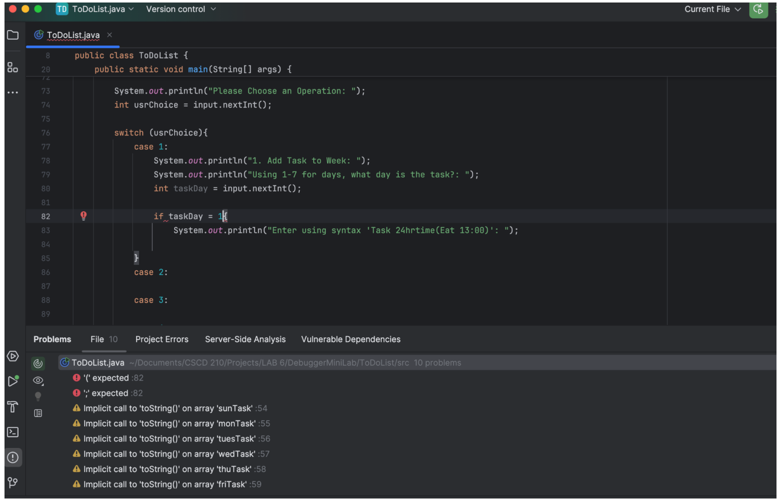


```java
// Module Imports
import java.time.DayOfWeek;
import java.util.Scanner;
import java.time.LocalTime;
import java.time.LocalDate;


public class ToDoList {

    // Task Storage
     static String[] task ;  3 usages



    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

        // Fetch Current Date/Time from System
        LocalTime time = LocalTime.now();
```

```
Using 1-7 for days, what day is the task?:
1
Enter using syntax 'Task 24hrtime' ( ex: Eat 13:00 ):
Eat 13:00
Exception in thread "main" java.lang.NullPointerException Create breakpoint : Cannot store to object array because "ToDoList.task" is null
	at ToDoList.main(ToDoList.java:72)

Process finished with exit code 1
```

Add Task Thread Except (Runtime)

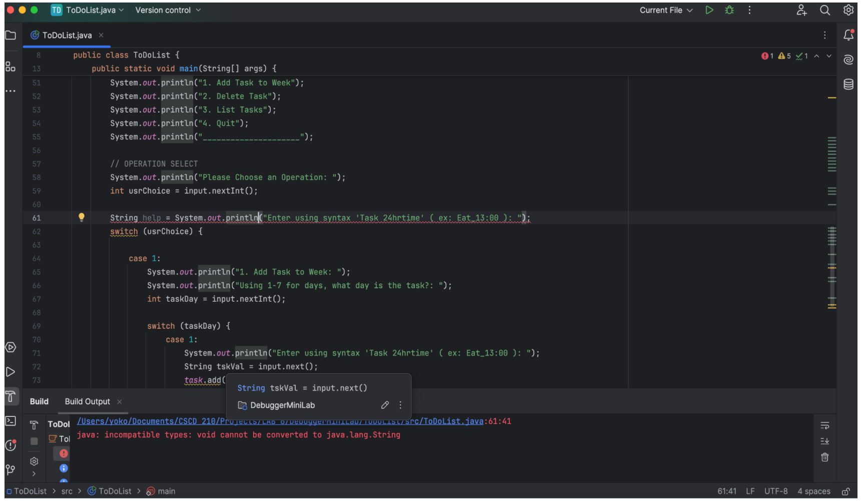
Bug Hall of Fame



```
8   public class ToDoList {
20      public static void main(String[] args) {
73          System.out.println("Please Choose an Operation: ");
74          int usrChoice = input.nextInt();
75
76          switch (usrChoice){
77              case 1:
78                  System.out.println("1. Add Task to Week: ");
79                  System.out.println("Using 1-7 for days, what day is the task?: ");
80                  int taskDay = input.nextInt();
81
82                  if taskDay = 1{
83                      System.out.println("Enter using syntax 'Task 24hrtime(Eat 13:00)': ");
84
85              }
86              case 2:
87
88              case 3:
89
```

```
ToDoList.java ~/Documents/CSCD 210/Projects/LAB 6/DebuggerMiniLab/ToDoList/src  10 problems
  '(' expected :82
  ';' expected :82
  Implicit call to 'toString()' on array 'sunTask' :54
  Implicit call to 'toString()' on array 'monTask' :55
  Implicit call to 'toString()' on array 'tuesTask' :56
  Implicit call to 'toString()' on array 'wedTask' :57
  Implicit call to 'toString()' on array 'thuTask' :58
  Implicit call to 'toString()' on array 'friTask' :59
```

Err L82 (Syntax)



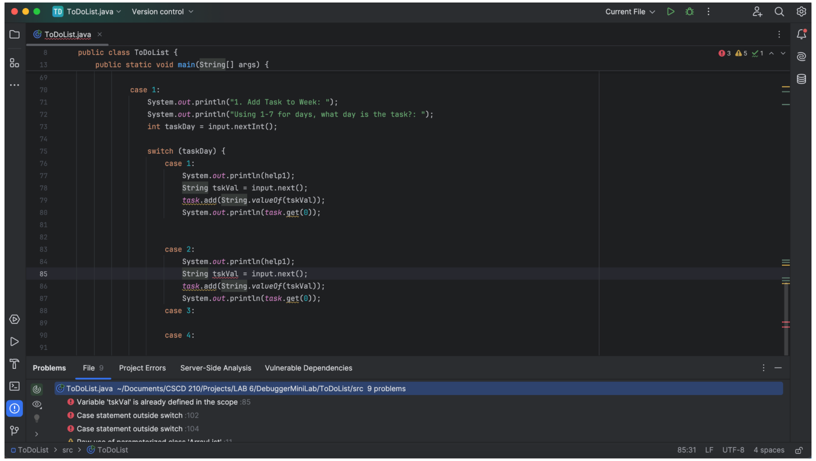
```
8   public class ToDoList {
13      public static void main(String[] args) {
51          System.out.println("1. Add Task to Week");
52          System.out.println("2. Delete Task");
53          System.out.println("3. List Tasks");
54          System.out.println("4. Quit");
55          System.out.println("____________________");
56
57          // OPERATION SELECT
58          System.out.println("Please Choose an Operation: ");
59          int usrChoice = input.nextInt();
60
61          String help = System.out.println("Enter using syntax 'Task 24hrtime' ( ex: Eat_13:00 ): ");
62          switch (usrChoice) {
63
64              case 1:
65                  System.out.println("1. Add Task to Week: ");
66                  System.out.println("Using 1-7 for days, what day is the task?: ");
67                  int taskDay = input.nextInt();
68
69                  switch (taskDay) {
70                      case 1:
71                          System.out.println("Enter using syntax 'Task 24hrtime' ( ex: Eat_13:00 ): ");
72                          String tskVal = input.next();
73                          task.add(
```

```
String tskVal = input.next()
```

```
/Users/yoko/Documents/CSCD 210/Projects/LAB 6/DebuggerMiniLab/ToDoList/src/ToDoList.java:61:41
java: incompatible types: void cannot be converted to java.lang.String
```

Err L61 (Syntax)

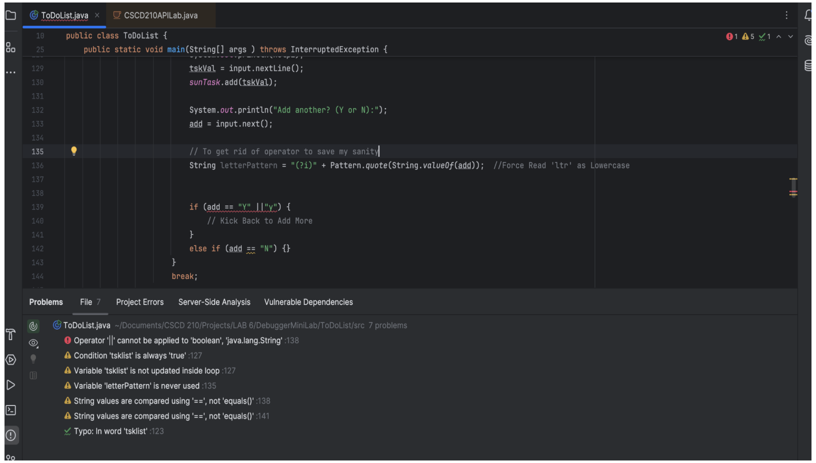
Bug Hall of Fame



```
ToDoList.java   Version control                                     Current File

ToDoList.java ×
8       public class ToDoList {
13          public static void main(String[] args) {
69
70                  case 1:
71                      System.out.println("1. Add Task to Week: ");
72                      System.out.println("Using 1-7 for days, what day is the task?: ");
73                      int taskDay = input.nextInt();
74
75                      switch (taskDay) {
76                          case 1:
77                              System.out.println(help1);
78                              String tskVal = input.next();
79                              task.add(String.valueOf(tskVal));
80                              System.out.println(task.get(0));
81
82
83                          case 2:
84                              System.out.println(help1);
85                              String tskVal = input.next();
86                              task.add(String.valueOf(tskVal));
87                              System.out.println(task.get(0));
88                          case 3:
89
90                          case 4:
91
```

```
Problems   File 9   Project Errors   Server-Side Analysis   Vulnerable Dependencies

ToDoList.java ~/Documents/CSCD 210/Projects/LAB 6/DebuggerMiniLab/ToDoList/src  9 problems
    Variable 'tskVal' is already defined in the scope :85
    Case statement outside switch :102
    Case statement outside switch :104
    Raw use of parameterized class 'ArrayList' :11

ToDoList > src > ToDoList                                   85:31  LF  UTF-8  4 spaces
```

Err L85 (Syntax)

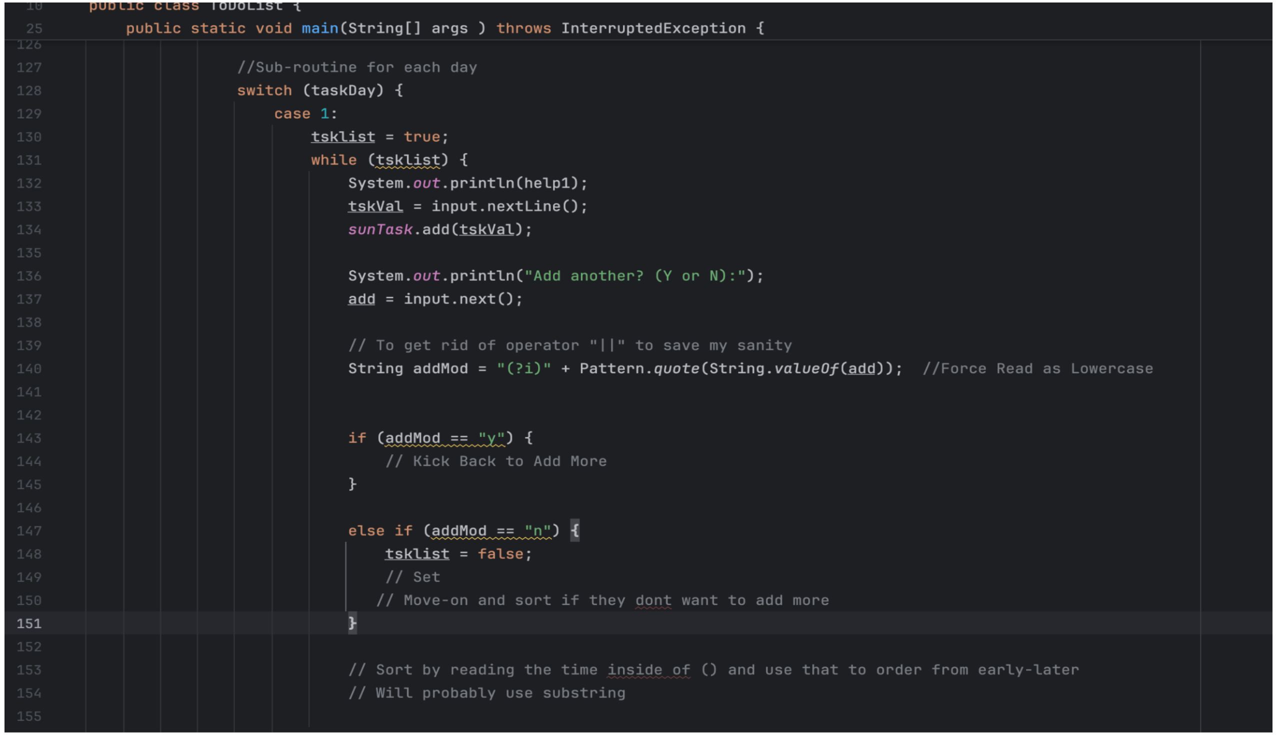


```
ToDoList.java ×   CSCD210APILab.java

10      public class ToDoList {
25          public static void main(String[] args ) throws InterruptedException {
129                         tskVal = input.nextLine();
130                         sunTask.add(tskVal);
131
132                         System.out.println("Add another? (Y or N):");
133                         add = input.next();
134
135                         // To get rid of operator to save my sanity
136                         String letterPattern = "(?i)" + Pattern.quote(String.valueOf(add));  //Force Read 'ltr' as Lowercase
137
138
139                         if (add == "Y" ||"y") {
140                             // Kick Back to Add More
141                         }
142                         else if (add == "N") {}
143                     }
144                     break;
```

```
Problems   File 7   Project Errors   Server-Side Analysis   Vulnerable Dependencies

ToDoList.java ~/Documents/CSCD 210/Projects/LAB 6/DebuggerMiniLab/ToDoList/src  7 problems
    Operator '||' cannot be applied to 'boolean', 'java.lang.String' :138
    Condition 'tsklist' is always 'true' :127
    Variable 'tsklist' is not updated inside loop :127
    Variable 'letterPattern' is never used :135
    String values are compared using '==', not 'equals()' :138
    String values are compared using '==', not 'equals()' :141
    Typo: In word 'tsklist' :123
```

Err L138 (Syntax)

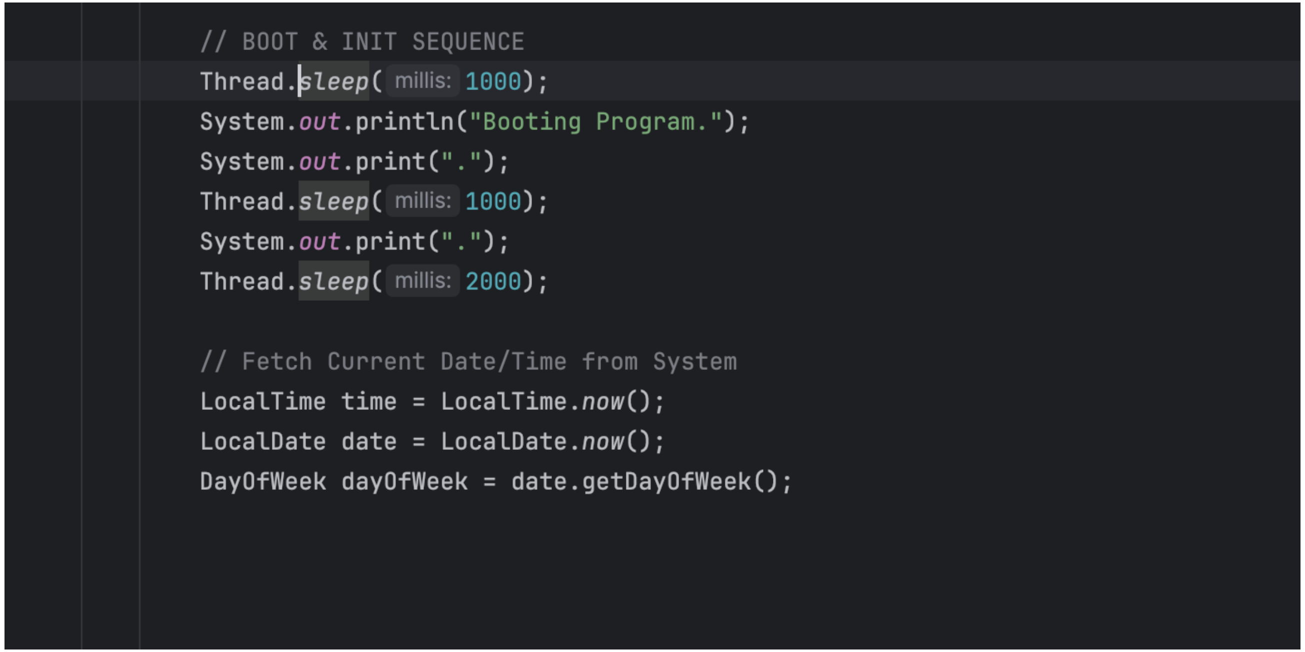
Bug Hall of Fame



```
public class ToDoList {
    public static void main(String[] args ) throws InterruptedException {

                //Sub-routine for each day
                switch (taskDay) {
                    case 1:
                        tsklist = true;
                        while (tsklist) {
                            System.out.println(help1);
                            tskVal = input.nextLine();
                            sunTask.add(tskVal);

                            System.out.println("Add another? (Y or N):");
                            add = input.next();

                            // To get rid of operator "||" to save my sanity
                            String addMod = "(?i)" + Pattern.quote(String.valueOf(add));  //Force Read as Lowercase


                            if (addMod == "y") {
                                // Kick Back to Add More
                            }

                            else if (addMod == "n") {
                                tsklist = false;
                                // Set
                               // Move-on and sort if they dont want to add more
                            }

                            // Sort by reading the time inside of () and use that to order from early-later
                            // Will probably use substring

```

Add More Task? (Logic)

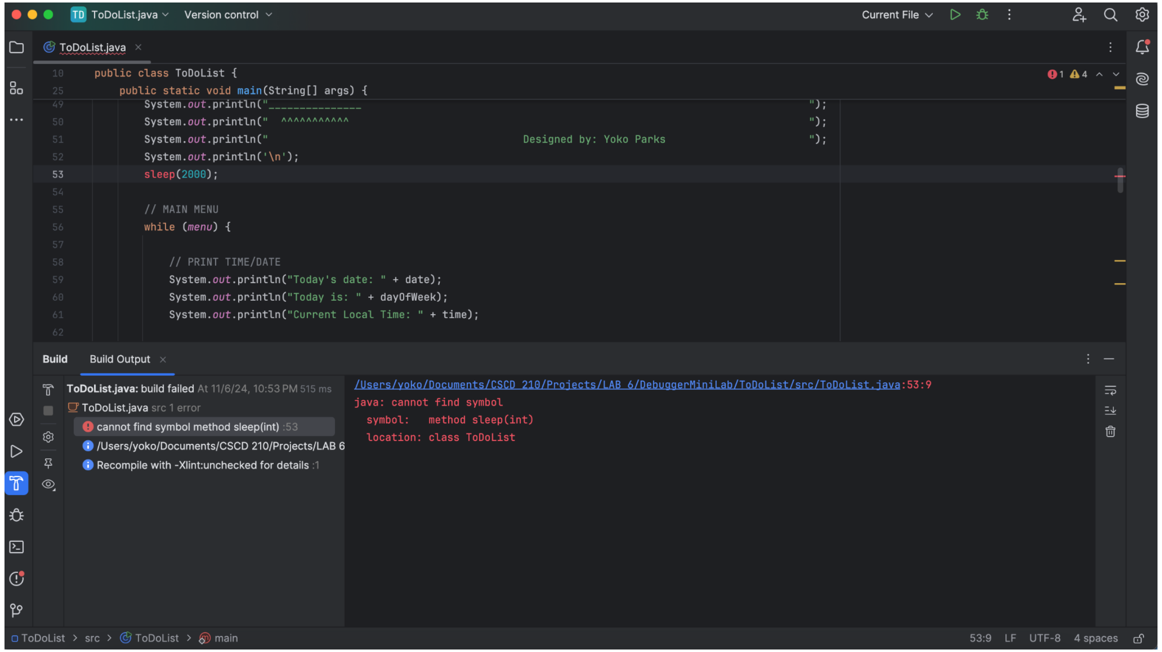
Bug Hall of Fame



```
// BOOT & INIT SEQUENCE
Thread.sleep( millis: 1000);
System.out.println("Booting Program.");
System.out.print(".");
Thread.sleep( millis: 1000);
System.out.print(".");
Thread.sleep( millis: 2000);

// Fetch Current Date/Time from System
LocalTime time = LocalTime.now();
LocalDate date = LocalDate.now();
DayOfWeek dayOfWeek = date.getDayOfWeek();
```

Boot Animation (Logic)

Bug Hall of Fame



ToDoList.java   Version control   Current File

ToDoList.java

```
10   public class ToDoList {
25       public static void main(String[] args) {
49           System.out.println("_______________                                                        ");
50           System.out.println("  ^^^^^^^^^^^                                                          ");
51           System.out.println("                                         Designed by: Yoko Parks       ");
52           System.out.println('\n');
53           sleep(2000);
54
55           // MAIN MENU
56           while (menu) {
57
58               // PRINT TIME/DATE
59               System.out.println("Today's date: " + date);
60               System.out.println("Today is: " + dayOfWeek);
61               System.out.println("Current Local Time: " + time);
62
```

Build   Build Output

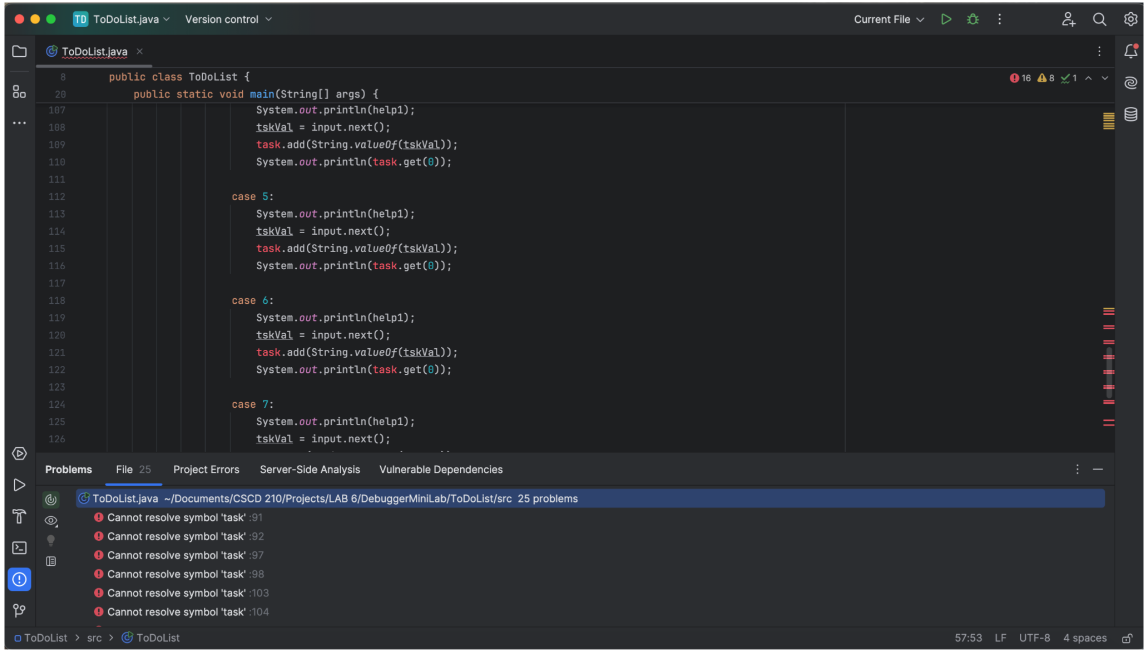
```
ToDoList.java: build failed At 11/6/24, 10:53 PM 515 ms
  ToDoList.java src 1 error
    cannot find symbol method sleep(int) :53
    /Users/yoko/Documents/CSCD 210/Projects/LAB 6
    Recompile with -Xlint:unchecked for details :1
```

```
/Users/yoko/Documents/CSCD 210/Projects/LAB 6/DebuggerMiniLab/ToDoList/src/ToDoList.java:53:9
java: cannot find symbol
  symbol:   method sleep(int)
  location: class ToDoList
```

ToDoList > src > ToDoList > main   53:9   LF   UTF-8   4 spaces

More Animation Errors
(Syntax)

King of The Bugs



ToDoList.java   Version control   Current File

ToDoList.java

```
public class ToDoList {
    public static void main(String[] args) {
                        System.out.println(help1);
                        tskVal = input.next();
                        task.add(String.valueOf(tskVal));
                        System.out.println(task.get(0));

                    case 5:
                        System.out.println(help1);
                        tskVal = input.next();
                        task.add(String.valueOf(tskVal));
                        System.out.println(task.get(0));

                    case 6:
                        System.out.println(help1);
                        tskVal = input.next();
                        task.add(String.valueOf(tskVal));
                        System.out.println(task.get(0));

                    case 7:
                        System.out.println(help1);
                        tskVal = input.next();
```

Problems   File 25   Project Errors   Server-Side Analysis   Vulnerable Dependencies

```
ToDoList.java ~/Documents/CSCD 210/Projects/LAB 6/DebuggerMiniLab/ToDoList/src  25 problems
    Cannot resolve symbol 'task' :91
    Cannot resolve symbol 'task' :92
    Cannot resolve symbol 'task' :97
    Cannot resolve symbol 'task' :98
    Cannot resolve symbol 'task' :103
    Cannot resolve symbol 'task' :104
```

ToDoList > src > ToDoList   57:53 LF UTF-8 4 spaces

Task Var Resolution (Syntax bc I removed a single reference upstream)

General Challenges

- Organization of my thoughts in a big program; I fix bugs on the fly as opposed to writing then correcting
- Constant Traversing of Code for fixes
- Boot Animation without libraries
- Scope of the project may have needed fleshing out
- Time Constraint
- Syntax & Logic Errors galore compared to Runtime Errors

Overcoming Obstacles

- Animated sequences using print appends and sleep functions
- Debugging Console being a timesaver
- Getting creative to work around issues with structure & design
- Breaking down problems into their parts
- Copying code to keep track of progress
- Scheduling to carve out time

Program Limitations

- Only schedules 1 week at a time right now, and has no scheduling intelligence (yet)
- Error handling has remained extremely sensitive, while most of them are patched I still have extreme edge cases to implement
- Heavy Reliance on “if” statements and switches
- UI animation is hard-coded and makes the code unfriendly to human eyes
- Planned Features needing extreme work to implement
- Unorthodox Organization of Code

Thank You!

This project was not only one for an assignment, but also for a skill display on my github page. If you're interested in following my work; please find me on GitHub via the QR. All projects are made and graded before being posted there to ensure academic integrity.