INTRO TO SOFTWARE ENGINEERING (CS-251)

Code Report

Assignment 1 Task 1

Name	ID	Hours spent learning java
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Todo – List

Click here, for Demonstration Video

Description

The program is a simple Command line-Interface Todo list with many basic and intermediate-advanced features.

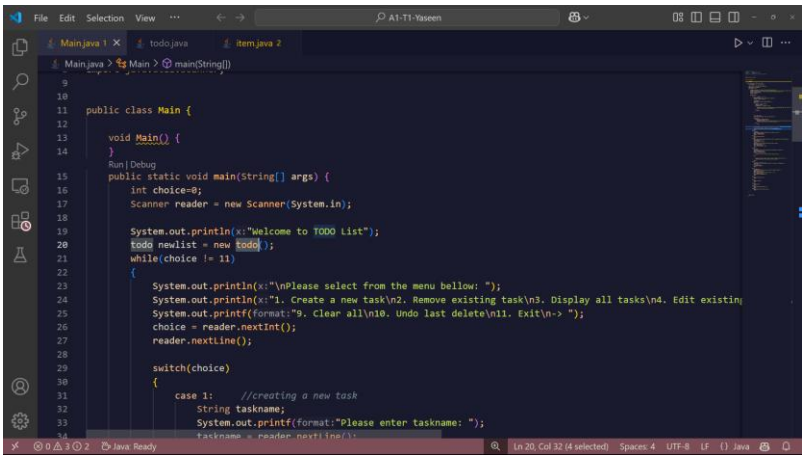
We will go through a feature list then an explanation of the main function flow

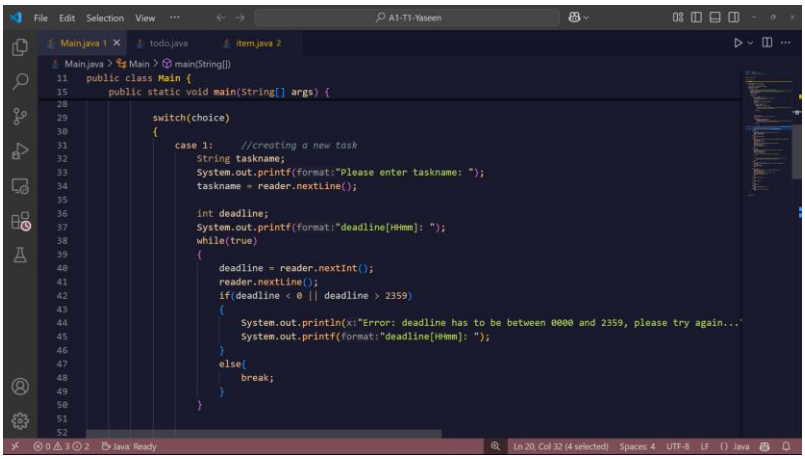
Feature Name	Brief Explanation	Number
Create new task	Adds a new task to the list, with basic information supplied like name, deadline and description	1
Remove existing task	Removes existing task supplied index num	2
Display all tasks	Prints out all saved tasks in a table-like form	3
Edit existing tasks	Change task deadline or description	4
Mark as done	Flags task as finished and updates statistic	5
Change list order	Automatically sorts by deadline or Importance ascendingly	6
Change task priority	Changes default task priority value of 1	7
View task statistics	Displays Finished and unfinished tasks	8
Clear all	Deletes all tasks	9
Undo last delete	Brings back last removed task	10
Exit	Exits program	11

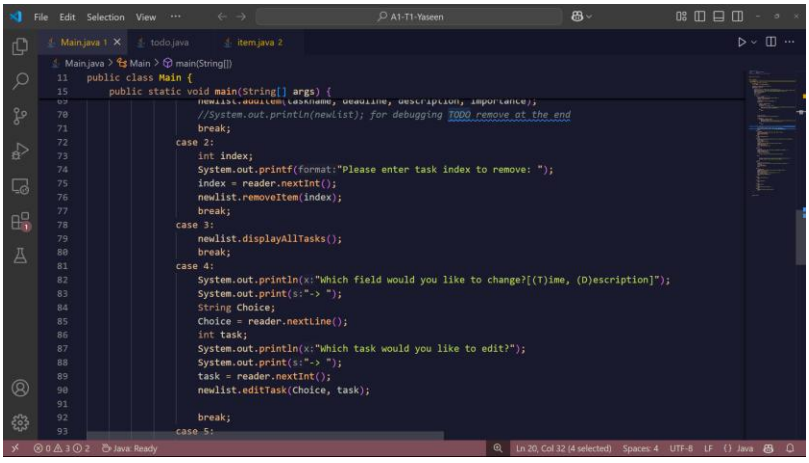
Main function flow

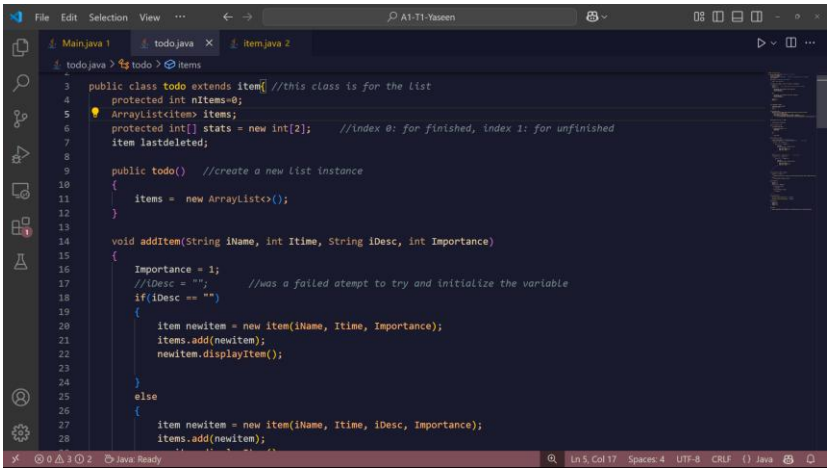
Start by initializing a scanner object to take input, going to a while loop menu with break case only when input is 11, displaying menu, and taking input in choice variable, and going through a switch-case statement to decide which operation to conduct

Screenshots:

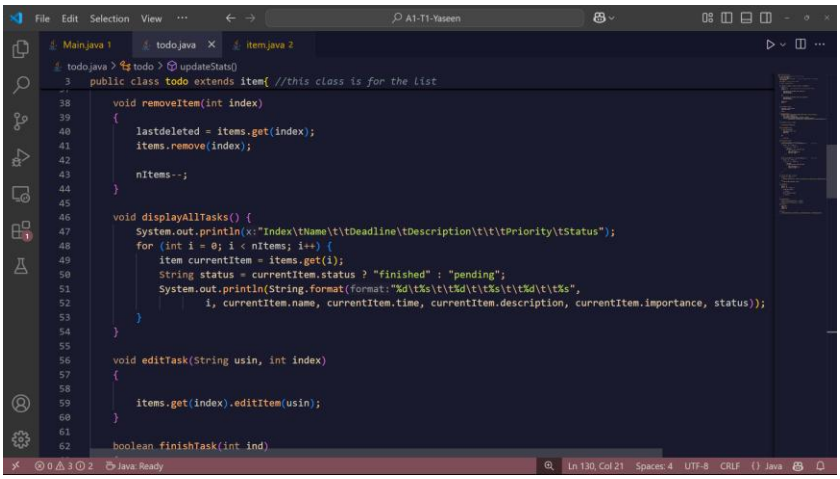




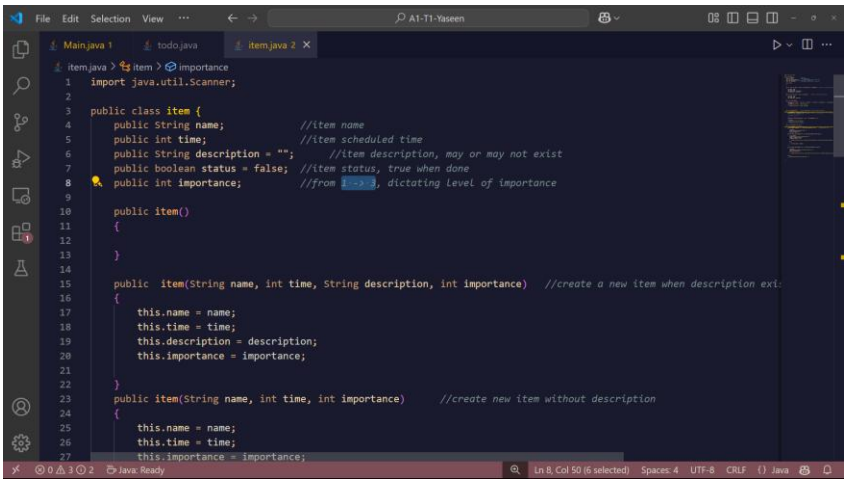




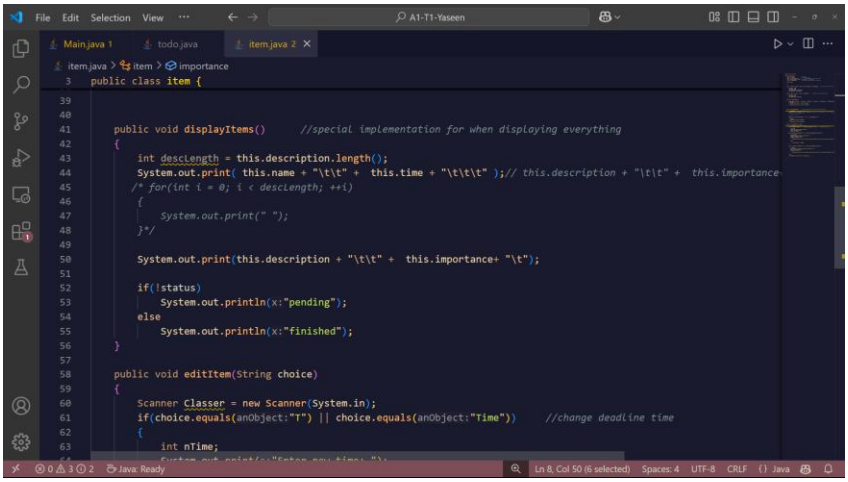
```java
public class todo extends item{ //this class is for the list
    protected int nItems=0;
    ArrayList<item> items;
    protected int[] stats = new int[2];     //index 0: for finished, index 1: for unfinished
    item lastdeleted;

    public todo()   //create a new list instance
    {
        items =  new ArrayList<>();
    }

    void addItem(String iName, int Itime, String iDesc, int Importance)
    {
        Importance = 1;
        //iDesc = "";       //was a failed atempt to try and initialize the variable
        if(iDesc == "")
        {
            item newitem = new item(iName, Itime, Importance);
            items.add(newitem);
            newitem.displayItem();

        }
        else
        {
            item newitem = new item(iName, Itime, iDesc, Importance);
            items.add(newitem);
```



```java
public class todo extends item{ //this class is for the list

    void removeItem(int index)
    {
        lastdeleted = items.get(index);
        items.remove(index);

        nItems--;
    }

    void displayAllTasks() {
        System.out.println(x:"Index\tName\t\tDeadline\tDescription\t\t\tPriority\tStatus");
        for (int i = 0; i < nItems; i++) {
            item currentItem = items.get(i);
            String status = currentItem.status ? "finished" : "pending";
            System.out.println(String.format(format:"%d\t%s\t\t%d\t\t%s\t\t\t%d\t\t%s",
                    i, currentItem.name, currentItem.time, currentItem.description, currentItem.importance, status));
        }
    }

    void editTask(String usin, int index)
    {

        items.get(index).editItem(usin);
    }

    boolean finishTask(int ind)
```



```java
import java.util.Scanner;

public class item {
    public String name;             //item name
    public int time;                //item scheduled time
    public String description = "";      //item description, may or may not exist
    public boolean status = false;  //item status, true when done
    public int importance;          //from 1 -> 3, dictating level of importance

    public item()
    {

    }

    public  item(String name, int time, String description, int importance)   //create a new item when description exi
    {
        this.name = name;
        this.time = time;
        this.description = description;
        this.importance = importance;

    }
    public item(String name, int time, int importance)      //create new item without description
    {
        this.name = name;
        this.time = time;
        this.importance = importance;
```


File Edit Selection View
A1-T1-Yaseen
Main.java 1
todo.java
item.java 2
item.java > item > importance
public class item {
public void displayItems() //special implementation for when displaying everything
{
int desclength = this.description.length();
System.out.print(this.name + "\t\t" + this.time + "\t\t\t");// this.description + "\t\t" + this.importance
/* for(int i = 0; i < desclength; ++i)
{
System.out.print(" ");
}*/
System.out.print(this.description + "\t\t" + this.importance+ "\t");
if(!status)
System.out.println(x:"pending");
else
System.out.println(x:"finished");
}
public void editItem(String choice)
{
Scanner Classer = new Scanner(System.in);
if(choice.equals(anObject:"T") || choice.equals(anObject:"Time")) //change deadline time
{
int nTime;
Java: Ready
Ln 8, Col 50 (6 selected)
Spaces: 4
UTF-8
CRLF
Java