# Finance Tracker Requirements and Test Document

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#### INTRODUCTION:

This document will detail the various requirements and test cases needed to have a fully functional application. This program will be a personal monthly finance tracker where the user will be able to create entries, edit entries throughout the month and view all entries that have been entered. Further details can be found in the Software Design Document.

The requirements and test cases that follow break down the application into testable units. Some requirements and test cases are designed to test program reliability and adequate function of the back-end code. Other requirements and test cases are designed to test the user interface and its ability to interact with the back-end program. Both of these types of test cases requirements are necessary for the application to function.

#### **BACKGROUND INFORMATION:**

As previously stated, further information about the specific categories, sub-categories, accounts, types, etc. Is available in the software design document. Refer to tables 1-6 to see the list of available selections and when they should become available.

#### **REQUIREMENTS:**

**Table 1: Requirement Specifications** 

ID	Requirement Specification					
1	As a tester I want to create new instance of Entry.					
	1.1: A new instance can only be created when a valid entryID, entryID>0, is passe					
	in the constructor.					
	1.2: A new instance of Entry shall be initialized by setting all its values to −1 and					
	amount to 0.0.					
	1.3: The dollar amount, type, category, subcategory1-4, account, attributes shall					
	only be settable to a value greater than 0 after being initialized. An					
	InvalidEntryException shall be thrown if attempted.					
2	As a tester I want to group entries together in collection class Entries.					
	2.1: A new Entry may only be added if the entry is valid.					
	2.2: An Entry shall be able to be removed based on and entryNumber.					
	2.3: An Entry shall be able to be found by entryNumber.					
3	As a tester I want to create new instance of EntryFrame.					
	3.1: The program shall only display selection menus for dollarAmount, type,					
	account, an area for a comment, and the submit or cancel buttons if instantiated					
	with a null entry.					

	3.2: The program shall load the Entry data if instantiated and display all the
	previously selected and entered values for the user to change.
	3.3: The program shall add the Entry when the submit button is pressed only if the Entry contains valid information.
4	As a tester I want to be able to conduct file operations after instantiating a
	FileManager.
	4.1: The program shall name a new file Month.txt and it should be located in the
	directory ./Files/YYYY/Month.txt where YYYY is the current numerical year, and
	Month is the current month's name.
	4.2: The program shall be able to print a series of entries onto the file.
	4.3: The program shall be able to read the entries in a file, parse them into Entry
	objects and return an Entries object with all the file Entry objects in it.
5	As a tester I want to be able to translate integers into readable strings using an
	instance of Decoder.
	5.1: The program can take a String read from a file and decode it into a textual
	representation.
	5.2: The program will determine what account was charged and represent it in a
	text version.
	5.3: The program will only take the relevant information from an Entry.
6	As a tester I want to be able to instantiate a DisplayFrame.
	6.1: The program shall display all, non-null, entries stored in a file with a neat table.
	6.2: The program shall translate the raw entries using the Decoder class.
	6.3: The program shall display the total income, total spent, and remaining for each
	available account.
7	As a user I want to be able to create a new Entry by instantiating EntryFrame and
	store it locally.
	7.1: The program will display an error message when attempting to create a New
	Entry and the month file has not been created.
	7.2: The program will create a new instance of New Entry.
	7.3: The program will change the if the New Entry frame to match the entry
	number if the Entries list is not empty.
8	As a user I want to be able to edit an instance of Entry stored in Entries by
	instantiating EntryFrame and update it in the storage.
	8.1: The program will ask for an entry number when Edit Entry is clicked. If the
	entry number does not exist a pop-up message will notify the user.
	8.2: The program will ask for an entry number when Edit Entry is clicked. If the
	entry number exists a new instance of Entry Frame will be created and load the
	entry.
	8.3: The program will notify the user using a pop-up message if there is no file.
9	As a user I want to be able to delete an instance of Entry from all storage.
	9.1: The program will ask for an entry number to delete.
	9.2: The program will search for an Entry by number and if found remove it from
	the Entries collection class and update the file.

	9.3: The program will search for an Entry by number and if not found notify the					
	user using a pop-up.					
10	As a user I want to be able to view all instances of Entry stored in the current					
	month's File by instantiating Display Frame.					
	10.1: The program will notify the user using a pop-up when no current file exists.					
	10.2: The program will load and display each Entry stored in the current file.					
	10.3: The program will calculate the total income, total spent, and remaining for					
	each account, for the month.					
11	As a user I want to be able to view all instances of Entry stored in a selected					
	month's File by instantiating Display Frame.					
	11.1: The program will prompt the user to select the desired year and month using					
	a series pf pop-up dropdown.					
	11.2: The program will load the corresponding file if it exists and display it in a					
	DisplayFrame.					
	11.3 The program will total the income, expense, and remaining using the data in					
	the file.					
12	As a user I want to be able to delete all data for the current month.					
	12.1: The program will remove the current month file if it exists.					
	12.2: The program will notify the user using a pop-up if the file does not exist.					
	12.3: The program will clear the local Entries array so it does not store the local					
	data to the file.					
13	As a user I want to be able to create a File for the new month.					
	13.1: The program will create a new file for the current month if one does not exist.					
	13.2: The program will prompt the user to override the current file if one exists.					
	13.3: The program will create the directory if it does not exist.					

# **TEST CASES:**

**Table 1: Test Case Summary** 

User Story ID	Requirement ID	Test Case ID	Date	Status Pass/Fail/Pending
1	1.1	1.1	03.28.25	PASS
1	1.2	1.2	03.28.25	PASS
1	1.3	1.3	03.28.25	PASS
2	2.1	2.1	03.28.25	PASS
2	2.2	2.2	03.28.25	PASS
2	2.3	2.3	03.28.25	PASS
3	3.1	3.1	03.28.25	PASS
3	3.2	3.2	03.28.25	PASS
3	3.3	3.3	03.28.25	PASS
4	4.1	4.1	03.31.25	PASS

4	4.2	4.2	03.31.25	PASS
4	4.3	4.3	03.31.25	PASS
5	5.1	5.1	03.31.25	PASS
5	5.2	5.2	03.31.25	PASS
5	5.3	5.3	03.31.25	PASS
6	6.1	6.1	04.07.25	PASS
6	6.2	6.2	04.07.25	PASS
6	6.3	6.3	04.07.25	PASS
7	7.1	7.1	04.01.25	PASS
7	7.2	7.2	04.01.25	PASS
7	7.3	7.3	04.01.25	PASS
8	8.1	8.1	04.01.25	PASS
8	8.2	8.2	04.01.25	PASS
8	8.3	8.3	04.01.25	PASS
9	9.1	9.1	04.01.25	PASS
9	9.2	9.2	04.01.25	PASS
9	9.3	9.3	04.01.25	PASS
10	10.1	10.1	04.07.25	PASS
10	10.2	10.2	04.07.25	PASS
10	10.3	10.3	04.07.25	PASS
11	11.1	11.1	04.07.25	PASS
11	11.2	11.2	04.07.25	PASS
11	11.3	11.3	04.07.25	PASS
12	12.1	12.1	04.01.25	PASS
12	12.2	12.2	04.01.25	PASS
12	12.3	12.3	04.01.25	PASS
13	13.1	13.1	04.01.25	PASS
13	13.2	13.2	04.01.25	PASS
13	13.3	13.3	04.01.25	PASS

**Table 2: Test Case Template and Results** 

Test Case ID: 1.1 Current Status: PASS Date: 03.28.25

**Req. ID:** 1.1 A new instance can only be created when a valid entryID, entryID>0, is passed in the constructor.

Step#	Operator Action	Expected Results	Comments
1	In Entry Class /*Test Main*/ instantiate a new Entry object and pass it int 0.	Program should throw an InvalidEntryException with message: Invalid Entry Number.	<pre>/*TEST MAIN*/ Run main   Debug main   Run   Debug public static void main(String[] args) {     try {         Entry testEntry = new Entry(entryNlumber:0);         System.out.println(testEntry.getEntryString());     } catch (InvalidEntryException e) {         System.out.println(e);     } }</pre>
2	In Entry Class /*Test Main*/ instantiate a new Entry object and pass it int 1.	Program should print the new entry instance in the format: id,0.0,-1,-1,-1,-1,-1,-1,-1, This format represents an empty entry.	<pre>/*TEST MAIN*/ Run main   Debug main   Run   Debug public static void main(String[] args) {     try {         Entry testEntry = new Entry(entryNumber:1);         System.out.println(testEntry.getEntryString());     } catch (InvalidEntryException e) {         System.out.println(e);     } }</pre>

Test Case ID: 1.2	Current Status: pending	<b>Date:</b> 03.28.25
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**Req. ID:** A new instance of Entry shall be initialized by setting all its values to −1 and amount to 0.0.

Step#	Operator Action	Expected Results	Comments
	In Entry Class /*Test	Program should print	/*TEST MAIN*/ Run main   Debug main   Run   Debug public static void main(String[] args) {
	Main*/ instantiate a	the new entry instance	try {     Entry testEntry = new Entry(entryNumber:1);
	new Entry object and	in the format: id,0.0,-1,-	System.out.println(testEntry.getEntryString()); } catch (InvalidEntryException e) {
1	pass it int > 0.	1,-1,-1,-1,-1,	<pre>System.out.println(e); }</pre>
		This format represents	) -
		an empty entry.	

```
/*TEST MAIN*/
Run main | Debug main | Run | Debug

public static void main(String[] args) {

try {

Entry testEntry = new Entry(entryNumber:1);

System.out.println(testEntry.getEntryString());

} catch (InvalidEntryException e) {

System.out.println(e);

}

System.out.println(e);

166

}

167

}

PROBLEMS 4 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

1,0.0,-1,-1,-1,-1,-1,-1,-1,-1,
```

Test Case	Current Status: PASS	<b>Date:</b> 03.28.25
ID: 1.3		

**Req. ID:** 1.3 The dollar amount, type, category, subcategory1-4, account, attributes shall only be settable to a value greater than 0 after being initialized. An InvalidEntryException shall be thrown if attempted.

St	rown if attempted.  Operator Expected Results Coi					
	Action	Expected Results	Comments			
e	Action					
р   #						
1	In Entry Class /*Test Main*/ instantiate a new Entry object and pass it int 1. Use the setter methods to set all parameters to a value greater than 0 or non- empty string.	Program should print the new entry instance in the format: id,dollarAmount,type,category,subcategory2,subcategory3,subcategory4,accout,comment	ATEST MAIN*   Num man   Debug main   Run   Debug			
2	In Entry Class /*Test Main*/ instantiate a new Entry object and pass it int 1. Use the setter methods to set all parameters to a value greater than 0 or non- empty string. Using one of the setter	Program should throw and InvalidEntryException and print the corresponding error message. Example: InvalidEntryException: No Category Selected	159  ATEST PALIN! Run main Debug main   Run   Debug public static void main(Strii 101 102 103 104 105 106 107 108 108 109 109 109 109 109 109 109 109 109 109			

```
methods set a
value of 0 for
any of the
elements.
Example:
testEntry.setC
ategory(0);
```

```
Run main | Debug main | Run | Debug
public static void main(String[] args) {
                                                                                                  Run main | Debug main | Run | Debug
public static void main(String[] args) {
                      testEntry.setAmount(amount:12.22);
                                                                                                            testEntry.setAmount(amount:12.22);
                      testEntry.setType(type:2);
                                                                                                            testEntry.setType(type:2);
                      testEntry.setCategory(category:2);
testEntry.setSubcategory(subcategory:1);
                                                                                                            testEntry.setCategory(category:2);
                                                                                                           testEntry.setSubcategory(subcategory:1);
testEntry.setSubcategory2(subcategory2:2);
testEntry.setSubcategory3(subcategory3:1);
                      testEntry.setSubcategory2(subcategory2:2);
                      testEntry.setSubcategory3(subcategory3:1);
                      testEntry.setSubcategory4(subcategory4:3);
                                                                                                            testEntry.setSubcategory4(subcategory4:3);
                      testEntry.setAccount(account:2);
testEntry.setComment(comment:"Test Comment");
                                                                                                           testEntry.setComment(comment:"Test Comment");
                      System.out.println(testEntry.getEntryString());
                                                                                                           testEntry.setCategory(category:0);
                                                                                                       System.out.println(testEntry.getEntryString());
} catch (InvalidEntryException e) {
                      System.out.println(e);
                                                                                                            System.out.println(e);
                                                                                     PROBLEMS 4 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
PROBLEMS 4 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
```

Test Case ID: 2.1 **Current Status: PASS** Date: 03.28.25 Req. ID: 2.1 A new Entry may only be added if the entry is valid. Valid is not null. Step# **Operator Action Expected Results Comments** In Entries Class /\*TEST The Entry object e1 MAIN\*/ instantiate a should be added to the new Entries object. entries attribute. Instantiate a new Entry 1 object: e1 and set its data. Add e1 to entries. System.out.println(e.getEntryString()); In Entries Class /\*TEST The Entry object e1 /\*Its: | PAIR '/'
Run main | Debug main | Run | Debug
public static void main(String[] args) {
 Entries entries = new Entries();
 Entry e1 = null;
 entries.addEntry(e1); MAIN\*/ instantiate a should be rejected from new Entries object. the entries. for(Entry e : entries.entries) 2 Instantiate a new Entry object: e1 and set it equal to null.

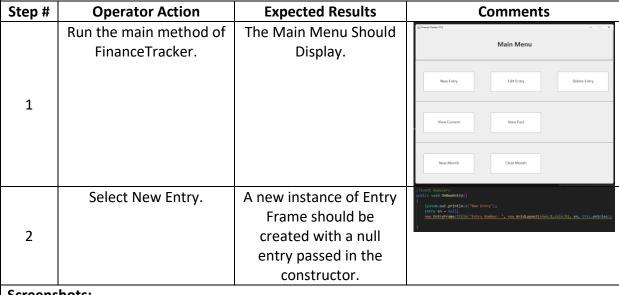
```
Run main | Debug main | Run | Debug
public static void main(String[] args) {
              Entries entries = new Entries();
              Entry e = new Entry(entryNumber:1);
              e.setAmount(amount:100.0);
              e.setCategory(category:1);
              e.setSubcategory(subcategory:1);
              e.setSubcategory2(subcategory2:1);
              e.setSubcategory3(subcategory3:1);
              e.setSubcategory4(subcategory4:1);
              e.setComment(comment:"This is a comment1");
              entries.addEntry(e);
              catch (InvalidEntryException e) {System.err.println(e);}
                  System.out.println(e.getEntryString());
PROBLEMS 7 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS
```

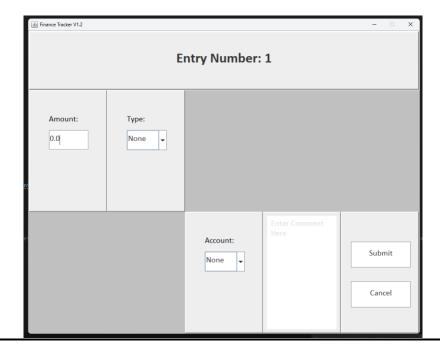
Test Case Curr		Curren	t Status: pending	<b>Date:</b> 03.28.25
		An Entr	y shall be able to be removed based on and entryNumbe	ır.
St		erator Expected Results		Comments
е	Act	ion	-	
р				
#				124 /*TEST MAIN */
1	Class / MAI instan new E object new object and s	ect. tiate a Entry ct: e1 eet its	Program should print the new entry instance in the format: id,dollarAmount,type,category,subcategory,subcategory2,subcategory3,subcategory4,accout,comment	Romania (Debug main   Dau (Dalug) public static vois dani(String) 126 public static vois dani(String) 127 128 129 130 e.artSanute (annute:100.0) e.artSanute (annute:100.0) 130 e.artSanute (annute:100.0) e.artSanute (annute:10) e
2	Use remov ByNur functi remov entry	the eEntry mber() ion to ve the by ID.	Program should print the rest of the entries in the array in this case nothing should be printed.	124 //TEST MAIN */ Num man   Debug man   Run   Debug 125   Debug man   Run   Debug 126   Entries entries - new Entr 127   try ( 128   Entry e - new Entry (entry) 129   e.setAnount(mount:100.05) 130   e.setAnount(mount:100.05) 131   e.setSubcategory(subcategory) 132   e.setSubcategory(subcategory) 133   e.setSubcategory(subcategory) 134   e.setSubcategory(subcategory) 135   e.setSubcategory(subcategory) 136   e.setSubcategory(subcategory) 137   e.setSubcategory(subcategory) 138   e.setSubcategory(subcategory) 139   e.setSubcategory(subcategory) 140   entries.oddintry(e) 141   for(Entry e : entries.entries.entries.entries.entries.entries.entries.entries.entries 142   for(Entry e : entries.entries.entries 143   for(Entry e : entries.entries) 144   for(Entry e : entries.entries) 145   for(Entry e : entries.entries) 146   for(Entry e : entries.entries) 147   for(Entry e : entries.entries) 148   for(Entry e : entries.entries) 149   for(Entry e : entries.entries) 140   for(Entry e : entries.entries) 141   for(Entry e : entries.entries) 142   for(Entry e : entries.entries) 143   for(Entry e : entries.entries) 144   for(Entry e : entries.entries) 145   for(Entry e : entries.entries) 146   for(Entry e : entries.entries) 147   for(Entry e : entries.entries) 148   for(Entry e : entries.entries) 149   for(Entry e : entries.entries) 140   for(Entry e : entries.entries) 140   for(Entry e : entries) 141   for(Entry e : entries) 142   for(Entry e : entries) 143   for(Entry e : entries) 144   for(Entry e : entries) 145   for(Entry e : entries) 146   for(Entry e : entries) 147   for(Entry e : entries) 148   for(Entry e : entries) 149   for(Entry e : entries) 140   for(Entry e : entries) 140   for(Entry e : entries) 140   for(Entry e : entries) 141   for(Entry e : entries) 142   for(Entry e : entries) 143   for(Entry e : entries) 144   for(Entry e : entries) 145   for(Entry e : entries) 1
Scre	enshot	s:		

Tes	t Case	Curre	ent Status: PASS	<b>Date:</b> 03.28.25		
ID: 2.3						
Rec	Req. ID: An Entry shall be able to be found by entryNumber.					
St	Opera	ator	Expected Results	Comments		
е	Action					
р						
#				ATTEST MATE AT		
	In Ent Clas /*TE MAIN	ss ST	Program should print the new entry instance in the format: id,dollarAmount,type,category,subcategory,subcategory2,subcategory3,subcategory4,accout,comment	tenimal compound in our beginning to the problem of		
	instan a ne Entri	tiate ew	y 2,5 a 5 category 5,5 a 5 category 1, a ceo a c, comment	134 e.setSubcategory4(subcategor 135 e.setAccount(account:1) 136 e.setComment(comment:'This i 137 entries.addEntry(e); 138 139 acatch (InvalidentryExcepti 141 for(Entry e : entries.entrie		
1	obje Instan	ct.		343 {   System.out.println(e.get 144   System.out.println(e.get 145   }		
	a ne Enti					
	object	•				
	and se					
	data.					
	e1 t entri					
	Use t		Program should return the entry and print it.	124		
	getEnt NmEr			e.setAmount(amount.100.0);  10 e.setCategory(category:1);  11 e.setSubcategory(subcategory:1);  12 e.setSubcategory(subcategory:1);		
2	funct	•		33 9 - setSubcategory3(subcategory4:1); 134 9 - setSubcategory4(subcategory4:1); 136 - setAccount(scount:1); 0 - setComment(comment:"This is a comment arrives.addintry(s		
	wit	h		137   entries.additry(e);   138   139   140		
	param	eter		142 Entry find = entries.getEntryByMmEntry( 143 if(find != null)(System.out.println("En		
	1.					
Scr	eenshot	s:				

Test Case ID: 3.1 **Current Status: PASS Date:** 03.28.25

Req. ID: 3.1 The program shall only display selection menus for dollarAmount, type, account, an area for a comment, and the submit or cancel buttons if instantiated with a null entry.

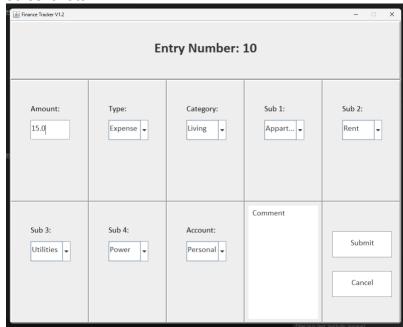




Test Case ID: 3.2 Current Status: Pass Date: 03.28.25

**Req. ID:** 3.2 The program shall load the Entry data if instantiated and display all the previously selected and entered values for the user to change.

Step#	Operator Action	Expected Results	Comments
	Run the main method of FinanceTracker.	The Main Menu Should Display.	(i) frame hader PG - X  Main Menu
1			New Entry Edit Entry Delete Entry
1			View Past View Past
			New Month Clear Month
	Select Edit Entry.	A new instance of Entry	<pre>public void Omiditatry() {     System.out.println(x)"dit Entry");     Entry en = null; }</pre>
2		Frame should be	<pre>try(en = new intry(entryNumber:18);en.cetAnount(amount15.0); en.setSype(1y=0;2);en.setCategory(altgory(1)); en.setSubcategory(y(subcategory(1)); en.setSubcategory(y(subcategory(2)); en.setSubcategory(y(subcategory(2)); en.setSubcategory(y(subcategory(2)));</pre>
		created with a	<pre>en.setSubcategory3(subcategory3:2); en.setSubcategory4(subcategory3:1); en.setAccount(1);</pre>
_		fabricated entry passed	<pre>en.setcoment(comment() }catch[invaliditryException e)[System.out.println(e);} new EntryFrame(title: "Entry Manher: ', new Gridlayout(ross:2,cols:5), en, this.entries);</pre>
		in the constructor.	



Test Case ID: 3.3 Current Status: pending Date: 03.28.25

**Req. ID:** 3.3 The program shall add the Entry when the submit button is pressed only if the Entry contains valid information.

Step#	Operator Action	Expected Results	Comments
1	Run the main method of FinanceTracker.	The Main Menu Should Display.	Main Menu   Menu Entry   Edit Entry   Delete Entry
2	Select New Entry.	A new instance of Entry Frame should be created with a null entry passed in the constructor.	//Event Hospitars public unid Official College (Chry)  fysice out printing (Chry)  force out printing (Chry)  force out printing (Chry)  force force (Chry)  force force (Chry)  force force (Chry)  f
3	Click Submit	An Error message should appear, invalid amount.	Entry Number: 3  Entry Number: 3  Annount:  Type:  O O Face Account:  Foore Comment  Foore Comment  Careed  Careed
4	Enter Amount > 0 and click Submit.	An Error message should appear, invalid type.	Entry Number: 3  Entry Number: 3  Annual: Type:    Sector Contract   Here   Suddenit   Carsol

5	Select type expense and click submit.	An Error message should appear, invalid category.	Entry Number: 3  Entry Number: 3  Annount: Type: Category  Type: Sepanse   S
6	Select category personal and click submit.	An Error message should appear, no account selected.	Entry Number: 3  Entry Number: 3  Arount: Type: Category: Sub 1: Too a large and a large a
7 Screens	Select Account personal and click submit.	The frame should close and return to the main menu.	
Screens	mots:		

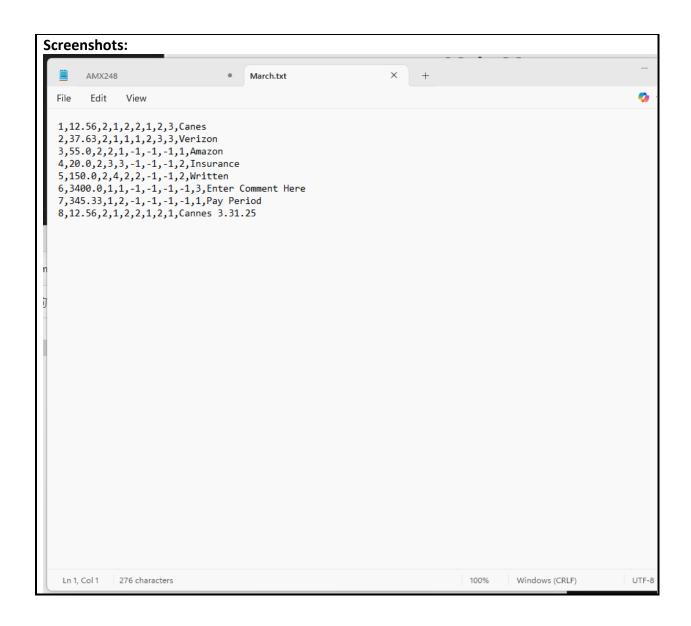


Req. ID: 4.1 The program shall name a new file Month.txt and it should be located in the

		ere YYYY is the current nume	rical year, and Month is the
	month's name.	T	T
Step#	Operator Action	Expected Results	Comments
1	In the FileManager class's  /*TEST MAIN*/ create a  new instance of  FileManager.	A new instance shall be created.	FileManager fm = new FileManager();
2	Using the makeDir and makeFile functions create a directory and file with the required name and location.	A new Directory shall be created named after the numerical year and inside of it contains a text file named after the current month.  LOCATION:  ./Files/YYYY/Month  Example:  ./Files/2025.March  **Total Code   Total Code   Tot	
Screens	hots:		
Pictur  Music  Video  Comm	March  Dep   Modes  Monents  M	General Digital Signatures Security Details Properties  March  Type of file: Text Document (txt)  Opens with: Notepad  Location: mming\Java\FinanceTracker\V2-Sp  Size: 246 bytes (246 bytes)  Size on disk: 0 bytes  Created: Monday, March 31, 2025, 6:54:39 f  Modified: Monday, March 31, 2025, 6:57:37 f  Accessed: Today, March 31, 2025, 2 hours ag  Attributes: Read-only Hidden	change  PM  PM

1 item 1 item selected 246 bytes

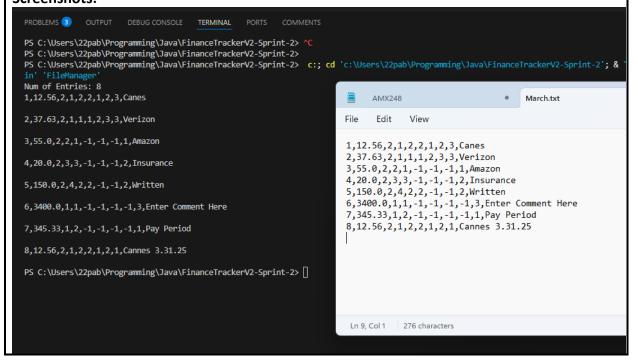
Test Cas	Test Case ID: 4.2 Current Status: PASS		Date: 03.31.25		
Req. ID:	Req. ID: 4.2 The program shall be able to print a series of entries onto the file.				
Step#	Opera	tor Action	<b>Expected Results</b>	Comments	
1		ain funciton in Tracker.java.	A new main menu frame should be visible.	Main Menu	
2	Select	New Entry.	A new empty entry Frame should be visible.	Entry Number: 8  Entry Number: 8  Account:  Account:  Name  Account:  Can	
3	valid da	new Entry with ata and Click ubmit.	A new Entry object should be created and added to the Entries ArrayList.	Valid data includes: amount > 0, type selected, category selected, a selection made for any subcategories that are visible, an account selected, a comment entered.  Entry Number: 8  Entry Number: 8  Amount  Type:  Category  Sub 2: Food  Su	
4	equivaler	e Explorer or ht, navigate to 125/March.txt	Any Entry objects stored in the Entries object ArrayList should be printed in a semi-encoded string inside the file.	The numbers represent the selected index from the respective JComboBox.	



#### 

**Req. ID:** 4.3 The program shall be able to read the entries in a file, parse them into Entry objects and return an Entries object with all the file Entry objects in it.

Step#	Operator Action	Expected Results	Comments
1	In the FileManager /*TEST MAIN*/ function: Create a new instance of File Manager.	A new instance of FileManager shoud be created.	
2	Create an new instance of Entries and utilize the readEntries function in combination with the FILE PATH functions to read from the file created int the previous test case 4.2.	All the entries stored in the file should be read into the the Entries object.	
3	Create a new instance of ArraList <entry> and initialize it with the value if the Entries object array list using the getEntries method. Iterate through the entries and print them to the console.</entry>	All the entries stored in the file should be printed onto the console.	The second secon



Test Case ID: 5.1	Current Status: PASS	Date: 03.31.25
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**Req. ID:** 5.1 The program can take a String read from a file and decode it into a textual representation.

Step#	Operator Action	Expected Results	Comments
1	Using the /*TEST MAIN*/ found in FileManager.java, create a new instance of Decoder.	New null instance of decoder is created.	
2	Inside the for loop: initialize the new Decoder with the string of the current entry being read.	The current entry being read from the file, will be passed into Decoder.	
3	Us the getDecoded Method to print out the decoded equivalent of the data.	The console should display the decoded user selected data from the entry.	The contract of the contract o

```
PROBLEMS 3 OUTPUT
                      DEBUG CONSOLE TERMINAL
PS C:\Users\22pab\Programming\Java\FinanceTrackerV2-Sprint-2> ^{\mbox{C}}
PS C:\Users\22pab\Programming\Java\FinanceTrackerV2-Sprint-2>
PS C:\Users\22pab\Programming\Java\FinanceTrackerV2-Sprint-2> c:; cd 'c:\Users\22pab
Num of Entries: 8
RAW ENTRY: 1,12.56,2,1,2,2,1,2,3,Canes
Decoded Data: Expense Living Food Food Out Eat Out Restaurant
RAW ENTRY: 2,37.63,2,1,1,1,2,3,3,Verizon
Decoded Data: Expense Living Appartment Rent Utilities Cell
RAW ENTRY: 3,55.0,2,2,1,-1,-1,-1,1,Amazon
Decoded Data: Expense Purchase Personal
RAW ENTRY: 4,20.0,2,3,3,-1,-1,-1,2,Insurance
Decoded Data: Expense Flight Fun
RAW ENTRY: 5,150.0,2,4,2,2,-1,-1,2,Written
Decoded Data: Expense School Flight Training Exam
RAW ENTRY: 6,3400.0,1,1,-1,-1,-1,3,Enter Comment Here
Decoded Data: Income Mother
RAW ENTRY: 7,345.33,1,2,-1,-1,-1,1,Pay Period
Decoded Data: Income Pay Stub
RAW ENTRY: 8,12.56,2,1,2,2,1,2,1,Cannes 3.31.25
Decoded Data: Expense Living Food Food Out Eat Out Restaurant
PS C:\Users\22pab\Programming\Java\FinanceTrackerV2-Sprint-2>
```

Test Case ID: 5.2	Current Status: PASS	Date: 03.31.25			
Req. ID: 5.2 The program will determine what account was charged and represent it in a text					
version.					

Step#	Operator Action	<b>Expected Results</b>	Comments
	Using the /*TEST MAIN*/	New null instance of	
	found in	decoder is created.	
1	FileManager.java, create		
	a new instance of		
	Decoder.		
	Inside the for loop:	The current entry	
	initialize the new	being read from the	
2	Decoder with the string	file, will be passed into	
	of the current entry	Decoder.	
	being read.		
	Use the decodeAccount	The console should	A   TEXT FRANCE   TEXT FRANC
	method in the while loop	print what account the	
3	to print out what account	entries were charged	Tetries estries - fm.readintries(fm.get)]Jehnh(fm.getCurrentMonth(), fm.getCurrentYear()));  #resplications() and - estries(pointries());  #resplications() and - estries();  #resplications() and - estries();
	the entry was charged to.	to.	
Caraara			200 P System.out.ppintin();

PROBLEMS 3 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENT:

Charged to: Mother Account.

RAW ENTRY: 2,37.63,2,1,1,1,2,3,3,Verizon

Decoded Data: Expense Living Appartment Rent Utilities Cell

Charged to: Mother Account.

RAW ENTRY: 3,55.0,2,2,1,-1,-1,-1,1,Amazon Decoded Data: Expense Purchase Personal

Charged to: Personal Account.

RAW ENTRY: 4,20.0,2,3,3,-1,-1,-1,2,Insurance

Decoded Data: Expense Flight Fun Charged to: Flight Account.

RAW ENTRY: 5,150.0,2,4,2,2,-1,-1,2,Written

Decoded Data: Expense School Flight Training Exam

Charged to: Flight Account.

RAW ENTRY: 6,3400.0,1,1,-1,-1,-1,3,Enter Comment Here

Decoded Data: Income Mother Charged to: Mother Account.

RAW ENTRY: 7,345.33,1,2,-1,-1,-1,1,Pay Period

Decoded Data: Income Pay Stub Charged to: Personal Account.

RAW ENTRY: 8,12.56,2,1,2,2,1,2,1,Cannes 3.31.25

Decoded Data: Expense Living Food Food Out Eat Out Restaurant

Charged to: Personal Account.

PS C:\Users\22pab\Programming\Java\FinanceTrackerV2-Sprint-2> [

Test Case ID: 5.3 Current Status: PASS Date: 03.31.25

**Req. ID:** 5.3 The program will only take the relevant information from an Entry.

Step#	Operator Action	Expected Results	Comments
1	Run the /* Test Main*/ funciton in FileManager.java	A series of entries should be printed to the console.	Charged to: Mother Account.  RAW EMIRY: 2,37.63,2,1,1,1,2,3,3,Verizon Decoded Data: Expense Living Appartment Rent Utilities Cell Charged to: Mother Account.  RAW EMIRY: 3,55.0,2,2,1,-1,-1,-1,1,Amazon Decoded Data: Expense Furchase Personal Charged to: Personal Account.  RAW EMIRY: 3,55.0,2,3,3,-1,-1,-1,2,Insurance Decoded Data: Expense Fight fun Charged to: Flight Account.  RAW EMIRY: 4,20,0,2,3,3,-1,-1,-1,2,Insurance Decoded Data: Expense Fight fun Charged to: Flight Account.  RAW EMIRY: 5,150,0,2,4,2,2,-1,-1,2,Mritten Decoded Data: Expense School Flight Training Exam Charged to: Flight Account.  RAW EMIRY: 3,450,0,1,1,-1,-1,-1,-1,3,Enter Comment Here Decoded Data: Income Nother Charged to: Mother Account.  RAW EMIRY: 3,453,0,1,2,-1,-1,-1,-1,1,Pay Period Decoded Data: Tomose Poy Stub Charged to: Personal Account.  RAW EMIRY: 3,256,2,1,2,2,1,2,1,1, Cannes 3,31.25 Decoded Data: Expense Living Food Food Out Eat Out Restaurant Charged to: Personal Account.  PS C: Users\(\)\(222\)pay\(222\)pay\(232\)Programming\(\)\(32\)av\(232\)Programming\(\)\(32\)av\(232\)Programming\(32\)av\(232\)Programming\(32\)av\(232\)Programming\(32\)av\(323\)Print-2> \[ \]
2	Verify printed values are those that are relevant.	When the relevant information is printed, the data from Type to SubCat4 should be converted into text form if not a -1. If a -1 is encountered nothing should be printed for that value.	The format of a Raw Entry is as follows: Entry Number, Ammount, Type, Category, SubCat1, SubCat2, SubCat3, SubCat4, Account, Comment If a piece of data is not relevant, it should be marked by a -1.

Charged to: Mother Account.

RAW ENTRY: 2,37.63,2,1,1,1,2,3,3,Verizon
Decoded Data: Expense Living Appartment Rent Utilities Cell
Charged to: Mother Account.

RAW ENTRY: 3,55.0,2,2,1,-1,-1,-1,1,Amazon
Decoded Data: Expense Purchase Personal
Charged to: Personal Account.

RAW ENTRY: 4,20.0,2,3,3,-1,-1,-1,2,Insurance
Decoded Data: Expense Flight Fun
Charged to: Flight Account.

RAW ENTRY: 5,150.0,2,4,2,2,-1,-1,2,Written
Decoded Data: Expense School Flight Training Exam
Charged to: Flight Account.

RAW ENTRY: 6,3400.0,1,1,-1,-1,-1,-1,3,Enter Comment Here
Decoded Data: Income Mother
Charged to: Mother Account.

RAW ENTRY: 7,345.33,1,2,-1,-1,-1,-1,1,Pay Period
Decoded Data: Income Pay Stub
Charged to: Personal Account.

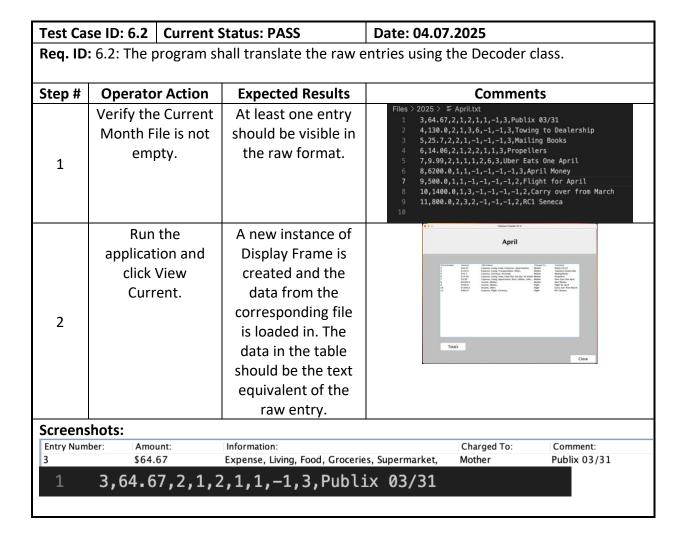
RAW ENTRY: 8,12.56,2,1,2,2,1,2,1,Cannes 3.31.25
Decoded Data: Expense Living Food Food Out Eat Out Restaurant
Charged to: Personal Account.

PS C:\Users\22pab\Programming\Java\FinanceTrackerV2-Sprint-2> []

Test Case ID: Current Status: PASS Date: 04.07.2025
6.1

Req. ID: 6.1: The program shall display all, non-null, entries stored in a file with a neat table.

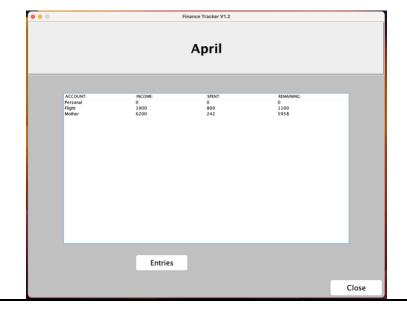
Step #	Operator Action	Expected Results	Comments
1	Run the application and click View Current	A new instance of Display Frame is created and the data from the corresponding file is loaded in.	April  April    Comparison   Co
2	Click on the totals button.	The table data should change to show totals.	Finance Tracker V1.2  April    According   MacAntel   M
3	Click the close button.	The frame is disposed and you are returned to the main menu.	Main Menu  Mew Entry  Edit Entry  Delete Entry  View Part  New Moreth  Clear Moreth



Test Case ID: 6.3 Current Status: PASS Date: 04.07.2025

**Req. ID:** 6.3: The program shall display the total income, total spent, and remaining for each available account.

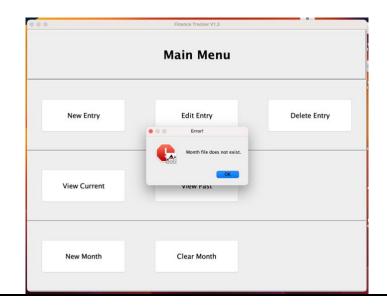
Step#	Operator Action	Expected Results	Comments
1	Run the application and click View Current	A new instance of Display Frame is created and the data from the corresponding file is loaded in.	April    Section   April   Sec
2	Click on the totals button.	The table data should change to show totals.	

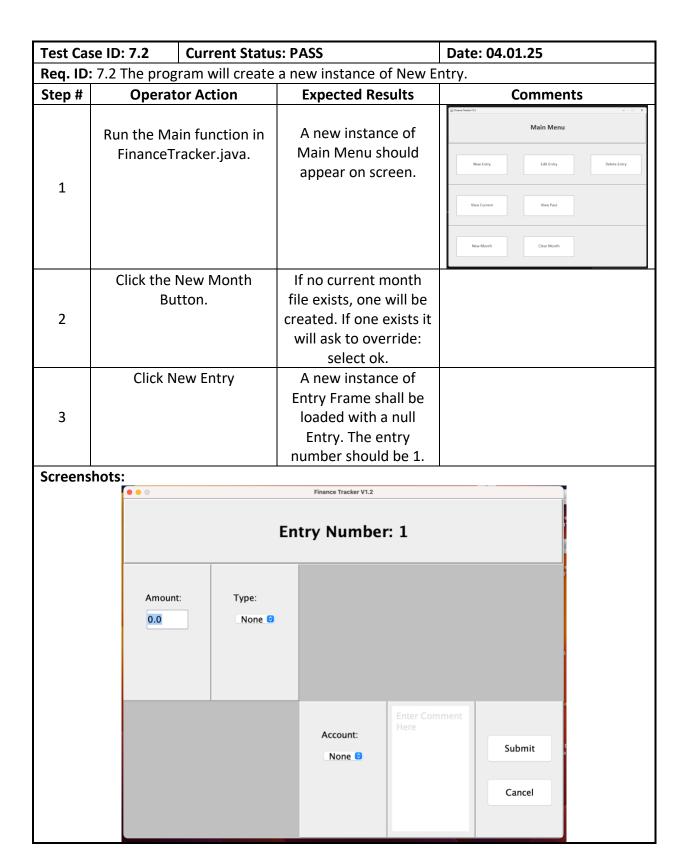


Test Case ID: 7.1 Current Status: PASS Date: 04.01.25

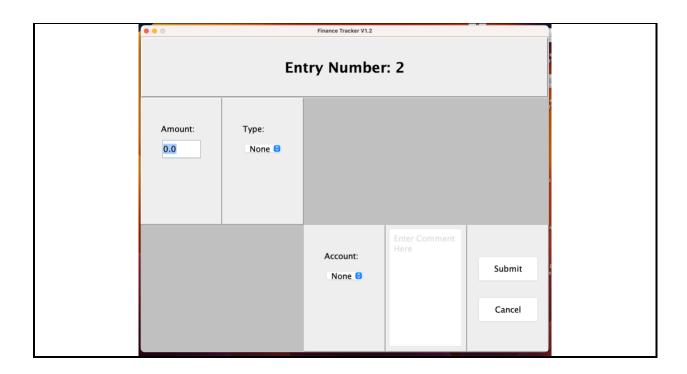
**Req. ID:** 7.1 The program will display an error message when attempting to create a New Entry and the month file has not been created.

Step#	Operator Action	Expected Results	Comments
1	Run the Main function in FinanceTracker.java.	A new instance of Main Menu should appear on screen.	Main Menu  New Entry  Edit Entry  Chlete Entry  Were Current  View Pest  New Month  Clear Month
2	Click the Clear Month button.	If a current month file exists, it will be removed from the computer.	
3	Click the New Entry button.	The application should create a pop-up window stating that there is no current month file.	





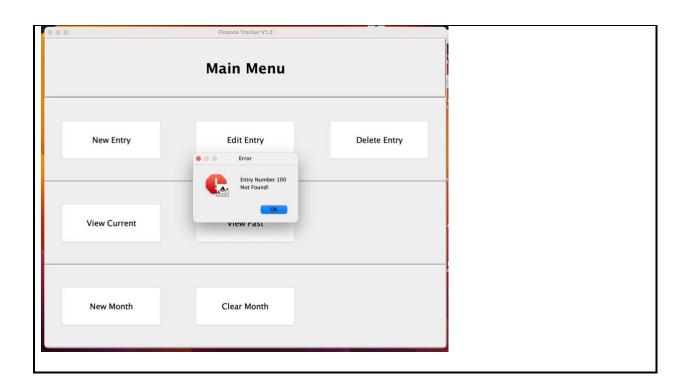
Test Case ID: 7.3 Current Status		s: PENDING	Date: 04.01.25		
Req. ID:	Req. ID: 7.3				
Step#	Operat	or Action	Expected Results	Comments	
1	Run the Main function in FinanceTracker.java.		A new instance of Main Menu should appear on screen.	Main Menu	
2		New Month tton.	If no current month file exists, one will be created. If one exists it will ask to override: select ok.		
3	Click N	ew Entry	A new instance of Entry Frame shall be loaded with a null Entry. The entry number should be 1.		
4	Enter a v	alid entry.	The entry should be added to the Entries collection class and printed to the current month file.	If the entry number reads something other than 1, it is likely there are already entries in the file. Skip this step if that is true.	
5 Screens		ew Entry	A new instance of Entry Frame shall be created with a null Entry. The entry number should be sequential to the previous entry.		



Test Case ID: 8.1 Current Status: PASS Date: 04.01.25

**Req. ID:** 8.1 The program will ask for an entry number when Edit Entry is clicked. If the entry number does not exist a pop-up message will notify the user.

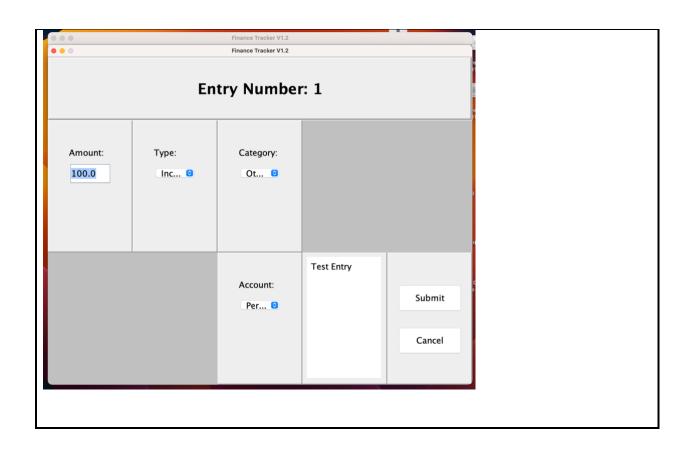
	does not exist a pop-up mes		
Step#	Operator Action	Expected Results	Comments
1	Run the Main function in FinanceTracker.java.	A new instance of Main Menu should open.	Main Menu   Main Menu
2	Select Edit Entry.	A pop-up should appear asking for an entry number.	Main Menu  New Entry Edit Entry Delete Entry View Current  New Month Clear Month
3	Enter 100	A pop-up should appear stating entry number 100 was not found.	This assumes there is less than 100 entries in the current file.
Screens	hots:		



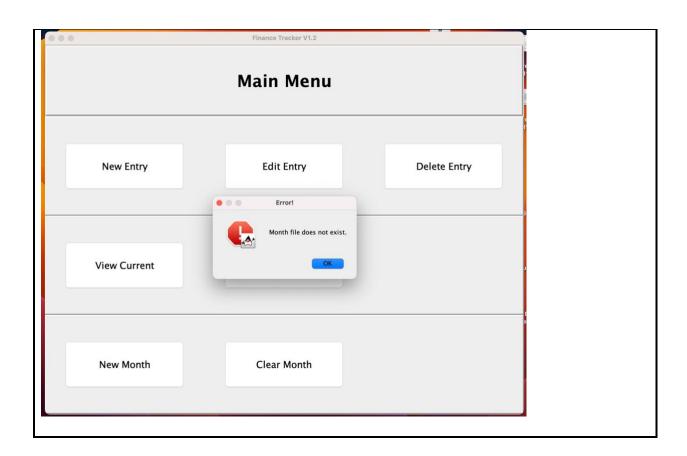
Test Case ID: 8.2 Current Status: PASS Date: 04.01.25

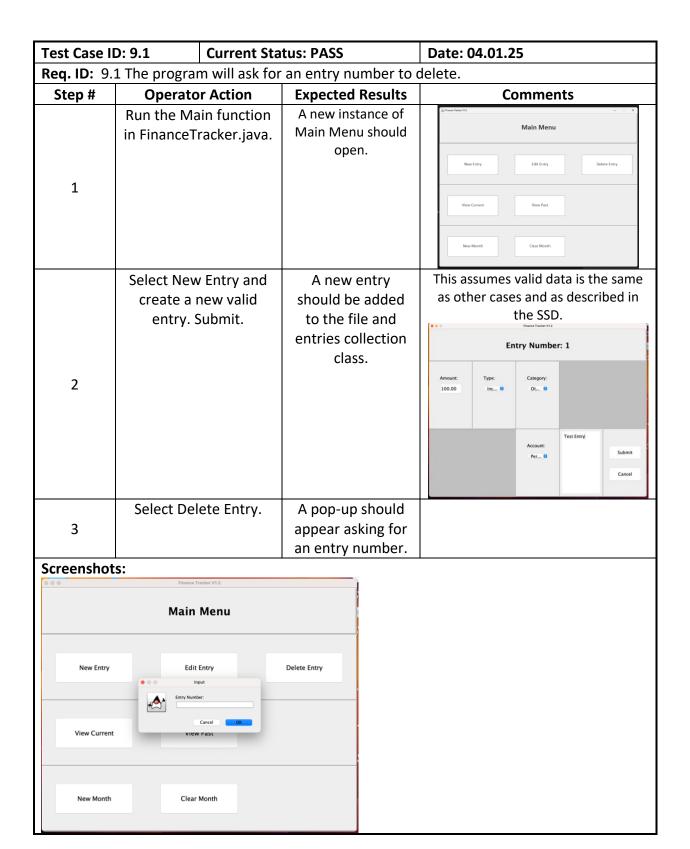
**Req. ID:** 8.2 The program will ask for an entry number when Edit Entry is clicked. If the entry number exists a new instance of Entry Frame will be created and load the entry.

Step #	sts a new instance of Entr	Expected Results	Comments
зсер#	Run the Main function	A new instance of	(ii) frame halor 1/2
	in FinanceTracker.java.	Main Menu should open.	Main Menu  New Intry Edit Fritry Chileta Entry
1			View Current View Past  New Month Clear Month
	Select New Entry and	A new entry	This assumes valid data is the same
	create a new valid	should be added	as other cases and as described in
	entry. Submit.	to the file and	the SSD.
		entries collection class.	Entry Number: 1
2			Amount: Type: Category:  100.00 Inc © Ot ©
			Account: Per  Cancel
	Select Edit Entry.	A pop-up should appear asking for	Main Menu
3		an entry number.	New Entry  Edit Entry  Payor  Tonny Muster  View Current  View Current
			New Month Clear Month
	Enter the number of the entry created in step 2.	A new instance of Entry Frame should be created	Main Menu  New Groy Safe Groy Delete Erroy
4	3ιυρ 2.	and the selected Entry should be loaded into the selections.	Non Genter Coar Roots  Can Roots
Screenshot	s:		



Test Case ID: 8.3		<b>Current Statu</b>	s: PASS	Date: 04.01.25
Req. ID:	8.3			
Step#	Operat	or Action	Expected Results	Comments
		in function in racker.java.	A new instance of Main Menu should open.	© frees has nr2 - ○ X  Main Menu
1				New Entry Edit Entry
				View Past
				New Month Clear Month
	Select Clea	r Month and	The current file should	
2	con	ifirm.	be removed from the	
			users computer.	
	Select E	dit Entry	A pop-up should	
3			appear stating there is	
			no current month file.	
Screens	hots:			





Test Case ID: 9.2 Current Status: PASS Date: 04.01.25

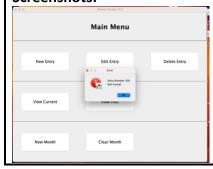
**Req. ID:** 9.2 The program will search for an Entry by number and if found remove it from the Entries collection class and update the file.

Entries collection class and update the file.				
Step#	Operator Action	Expected Results	Comments	
1	Run the Main function in FinanceTracker.java.	A new instance of Main Menu should open.	Main Menu  New Entry  Edit Entry  Delete Entry  View Past  New Month  Clear Month	
2	Select New Entry and create a new valid entry. Submit.	A new entry should be added to the file and entries collection class.	This assumes valid data is the same as other cases and as described in the SSD.  Final Plante Visit State Visit Submit Submit Submit Cancel	
3	Select Delete Entry.	A pop-up should appear asking for an entry number.	Main Menu  New Grey  Life Corpy  Deline Grey  Was Cartain  New South  Char March	
4	Enter 1.	The Entry should be removed from the text file and collection class.		
Screenshot	:s:			
T PAPELON TO SEPECTAL				

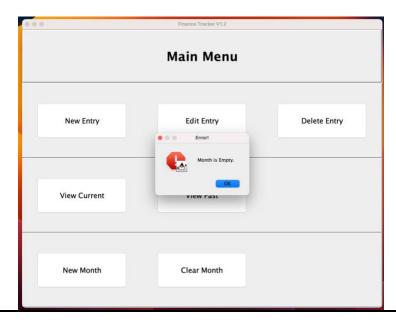
Test Case ID: 9.3 Current Status: PASS Date: 04.01.25

**Req. ID:** 9.3 The program will search for an Entry by number and if not found notify the user using a pop-up.

Step#	Operator Action	Expected Results	Comments
1	Run the Main function in FinanceTracker.java.	A new instance of Main Menu should open.	Main Menu   Main
2	Select New Entry and create a new valid entry. Submit.	A new entry should be added to the file and entries collection class.	This assumes valid data is the same as other cases and as described in the SSD.  Final Transmit Type:  Category:  Ot 8  Account:  Per 8  Test Entry  Submit  Cancel
3	Select Delete Entry.	A pop-up should appear asking for an entry number.	Main Menu  New Groy  Life Groy  L
4	Enter 100.	A pop-up should appear stating entry number 100 was not found.	This assumes the current file has less than 100 entries.



Test Cas	Test Case ID: 10.1 Current Status: PASS		: PASS	Date: 04.07.2025	
Req. ID:	Req. ID: 10.1: The program will notify the user using a pop-up when no current file exists				
Step#	Opera	tor Action	Expected Results	Comments	
1	click the Cl	oplication and ear Month and nfirm.	The current month file should be deleted.		
2		View Current utton.	The application should notify you the month does not exist.		

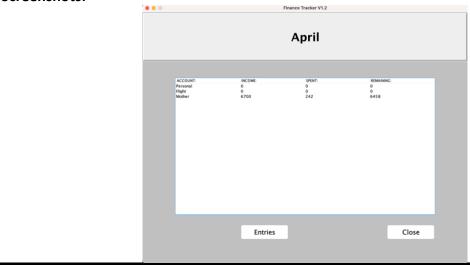


Test Cas	se ID:	Current Status: PASS		Date: 04.07.2025
10.2				
Req. ID:	10.2: The	program will l	load and display each Entr	y stored in the current file.
Step#	Operat	or Action	Expected Results	Comments
		application /iew Current	A new instance of Display Frame is	Finance Tracker VL3  April
1			created and the data from the corresponding file is loaded in.	Sept. Section   Section
				Totals
Screens	hots:			

Test Case ID: Current Status: PASS Date: 04.07.2025
10.3

**Req. ID:** 10.3: The program will calculate the total income, total spent, and remaining for each account, for the month.

Step#	Operator Action	Expected Results	Comments
1	Run the application and click View Current	A new instance of Display Frame is created and the data from the corresponding file is loaded in.	April    Totals   Property   Prop
2	Click the Totals Button.	The Application should display a new table with the total income, expense, and remaining for each account.	



Test Case ID:	Current Status: PASS	Date: 04.07.2025
11.1		

11.1: The program will prompt the user to select the desired year and month using a series pf pop-up dropdown.

pop-up	dropdown.	,					
Step#	<b>Operator Action</b>	Expected Results	Comments				
1	Run the program and select View Past.	The program will prompt you to select a year.	Main Menu  New Entry  Edit Entry  Delete Entry  View Current  View Past  New Month  Clear Month				
2	Select a year and click ok.	The program will prompt you to select a month.	Main Menu  Rew Entry  Edit Entry  Delete Entry  West Wash  View Current  View Past  New Month  Clear Month				
3	Select a month and click ok.	The program will create a new instance of Display Frame and load the corresponding data.					
Screens	Screenshots:						
		March  March  March  Institute State					

Test Case ID: Current Status: PASS Date: 04.07.2025
11.2

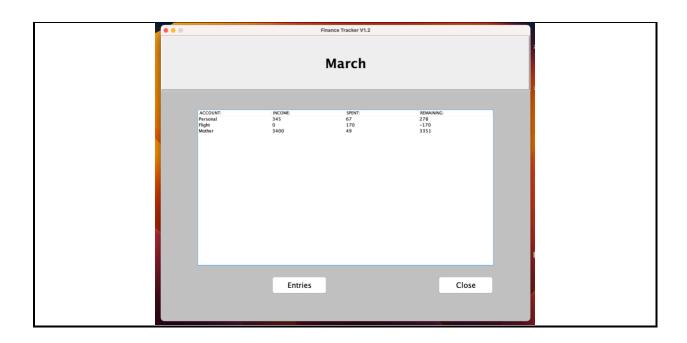
**Req. ID:** 11.2: The program will load the corresponding file if it exists and display it in a DisplayFrame.

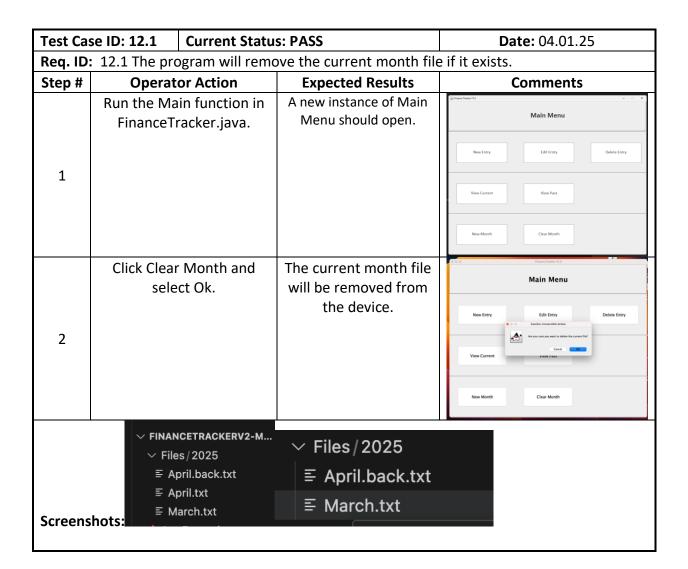
Display	rame.				
Step#	Operator Action	Expected Results	Comments		
	Run the program and select View Past.	The program will prompt you to select a	© © ©  Main Menu		
1		year.	New Entry  Edit Entry  Delete Entry  Solet Yare  2025 G  Gened X  View Current  View Past		
			New Month Clear Month		
	Select a 2025 and click ok.	The program will prompt you to select a	Main Menu		
2		month.	New Entry  Edit Entry  Delete Entry  Word Number  Manuface  View Current  View Past		
			New Month Clear Month		
3	Select March and click ok.	The program will create a new instance of Display Frame and load the corresponding data.			
Screenshots:					
		March			
		Care   Section   Care   Care			

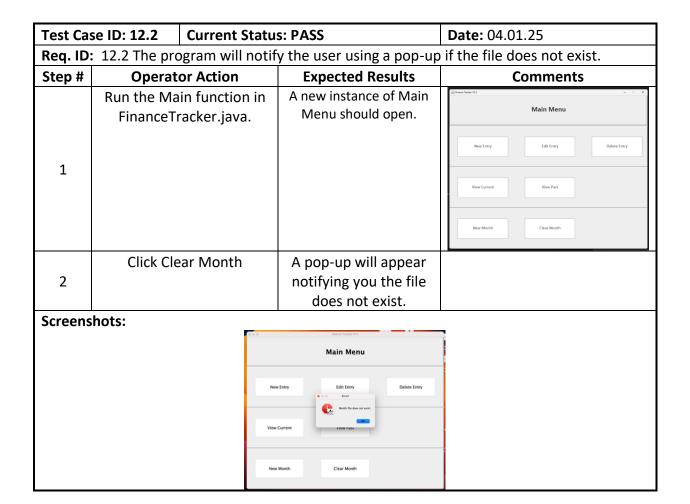
Test Case ID:	Current Status: PASS	Date: 04.07.2025
11.3		

**Req. ID:** 11.3 The program will total the income, expense, and remaining using the data in the file.

Step#	Operator Action	Expected Results	Comments
1	Run the program and select View Past.	The program will prompt you to select a year.	Main Menu  New Entry  Edit Entry  Delete Entry  Main Menu  New Current  View Past  New Month  Clear Month
	Select a year and click ok.	The program will prompt you to select a month.	Main Menu  New Entry  Edit Entry  Delete Entry
2			View Current  View Past  New Month  View Past  View Month  Clear Month
3	Select a month and click ok.	The program will create a new instance of Display Frame and load the corresponding data.	March  Ma
4	Click totals.	The program will display a new table with the correct totals for all accounts	



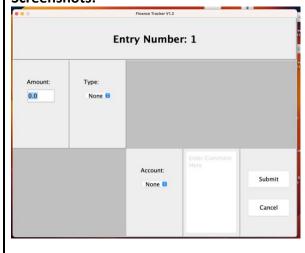


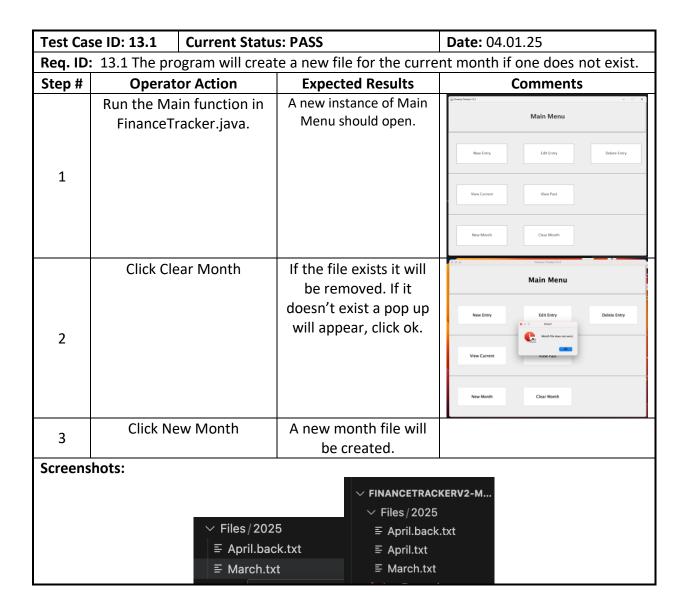


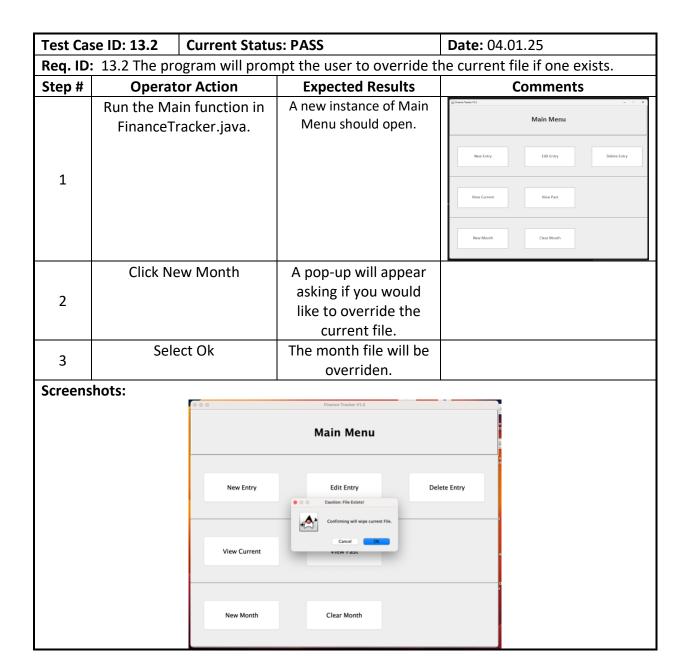
Test Case ID: 12.3 Current Status: PASS Date: 04.01.25

**Req. ID:** 12.3 The program will clear the local Entries array so it does not store the local data to the file.

Step#	Operator Action	Expected Results	Comments	
1	Run the Main function in FinanceTracker.java.	A new instance of Main Menu should open.	Main Menu	
2	Click clear month.	If the file exists it will be removed. If it doesn't exist a pop up will appear, click ok.	Main Menu  New Entry  Edit Entry  Delete Entry  View Current  View Current  View Month  Clear Month	
3	Click New Month	A new month file will be created.		
4	Click New Entry	A new instance of Entry Frame should be created with a null entry and entry number 1.	If the entry number is 1 it means the array list has been properly cleared.	







Test Case ID: 13.3 Currer		Current Statu	s: PASS	Date: 04.01.25				
Req. ID:	: 13.3 The program will create the directory if it does not exist.							
Step#	Operator Action		Expected Results	Comments				
	Run the Main function in FinanceTracker.java.		A new instance of Main Menu should open.	(⊕ Prescribite PL2 - □ X.)  Main Menu				
1				New Entry Edit Entry Delete Entry				
				View Past View Past				
				New Month Clear Month				
2		Files Directory cation folder.	No directory will exist.	✓ FINA [♣ ♣ ₺ ⑤]  J AppFrame.java  → CS225_P4/C225/Pro  J CS225_P4_Run_Java Pro  J CS225_P4_SDD_Ba  J Decoder.java  J DisplayFrame.java  J Entrys.java  J EntryFrame.java  J FileFormatException  J FileManager.java  J InvalidEntryExceptio  J LayoutMismatchExc  J MenuFrame.java  ≡ UML(4_01_2025)UP				
3	Click Ne	w Month.	The Files/20XX/ directory will be created depending on the current year.					
Screens  EXPLORER  FINA [2, 225  F April.txt  J AppFrame.js  CS225_P4_  CS225_P4_  CS225_P4_  J Decoder.jav  J Display/fram  J Entry.java  J Entry.java  J Entry.java  J FileFornam  J FileManager  J InvalidEntry  J LayoutMism  J MenuFrame  E UML(4_01_01	va ATS_Ba ATS							

## REFERENCES:

Oracle. (n.d.). *Trail: Creating a GUI with swing*. Trail: Creating a GUI With Swing (The JavaTM Tutorials). https://docs.oracle.com/javase/tutorial/uiswing/index.html

**APPENDICES:**