

## Black Box Test Plan

### Test Files Used:

ahnentafel.txt:

```
"1 Billy Smith
2 Charles Smith
3 Betty Jones
4 Henry Smith
5 Jane Williams
6 William Jones
7 Catherine King
8 Jimmy Smith
9 Joanne Harper
10 Richard Williams
11 Sally Poole"
```

empty.txt:

```
""
```

traversalPreError.txt:

```
"Billy Smith T
Bessie Smith F
Sarah Jones Z
```

```
Ashley Doe M
Timmy Doe M"
```

traversalPosError.txt:

```
"Billy Smith T
Bessie Smith F
Sarah Jones Z
```

```
Ashley Doe M
Timmy Doe M"
```

Test ID	Description	Expected Results	Actual Results
<b>testAhnentafel (ECP - building a searching a tree with correct file)</b>	<p>Preconditions:</p> <ul style="list-style-type: none"> <li>- Program compiles correctly</li> <li>- The file "ahnentafel.txt" is in the following directory 'input/'</li> </ul> <p>Steps:</p> <ol style="list-style-type: none"> <li>1. Run AncestryTreeManagerUI</li> <li>2. Input "1"</li> <li>3. Input "ahnentafel.txt"</li> <li>4. Input "Jane Williams"</li> <li>5. Exit the program successfully</li> </ol>	<ol style="list-style-type: none"> <li>1. Program asks to choose between ahnentafel and preOrder/postOrder inputs.</li> <li>2. Program asks for ahnentafel input file</li> <li>3. Program outputs level order as:  "LevelOrder[Smith, Billy; Smith, Charles; Jones, Betty; Smith, Henry; Williams, Jane; Jones, William; King, Catherine; Smith, Jimmy; Harper, Joanne; Williams, Richard; Poole, Sally]"</li> <li>4. Program asks to input a name to find the relationship to the root</li> <li>5. Program outputs: "Jane Williams is Billy Smith's grandmother"</li> </ol>	<ol style="list-style-type: none"> <li>1. "Ahnentafel (1) or PreOrder / PostOrder (2)?"</li> <li>2. "Enter your Ahnentafel filename: "</li> <li>3. "LevelOrder[Smith, Billy; Smith, Charles; Jones, Betty; Smith, Henry; Williams, Jane; Jones, William; King, Catherine; Smith, Jimmy; Harper, Joanne; Williams, Richard; Poole, Sally]"</li> <li>4. "Enter a name to find the relationship to:"</li> <li>5. "Jane Williams is Billy Smith's grandmother"</li> </ol>
<b>testEmptyTree (BVA - trying to</b>	<p>Preconditions:</p> <ul style="list-style-type: none"> <li>- Program compiles correctly</li> <li>- The file "empty.txt" is in the following directory 'input/'</li> </ul>	<ol style="list-style-type: none"> <li>1. Program asks to choose between ahnentafel and preOrder/postOrder inputs</li> </ol>	<ol style="list-style-type: none"> <li>1. "Ahnentafel (1) or PreOrder/PostOrder (2)?"</li> </ol>

<b>create a tree with an empty file)</b>	<p>Steps:</p> <ol style="list-style-type: none"> <li>1. Run AncestryTreeManagerUI</li> <li>2. Input "1"</li> <li>3. Input "empty.txt"</li> <li>4. Exit the program successfully</li> </ol>	<ol style="list-style-type: none"> <li>2. Program asks for ahnentafel input file</li> <li>3. Program outputs an error message that the file is empty</li> <li>4. The program exits without any more errors thrown</li> </ol>	<ol style="list-style-type: none"> <li>2. "Enter your Ahnentafel filename: "</li> <li>3. "Error: File is empty!"</li> </ol>
<b>testTraversalError or (DT - trying to build a tree from a file with incorrect formatting and characters)</b>	<p>Preconditions:</p> <ul style="list-style-type: none"> <li>- Program compiles correctly</li> <li>- The files "traversalPreError.txt" and "traversalPosError.txt" are in the following directory 'input/'</li> </ul> <p>Steps</p> <ol style="list-style-type: none"> <li>1. Run AncestryTreeManagerUI</li> <li>2. Input "2"</li> <li>3. Input "traversalPreError.txt" [space] "traversalPosError.txt"</li> <li>4. Exit the program successfully</li> </ol>	<ol style="list-style-type: none"> <li>1. Program asks to choose between ahnentafel and preOrder/postOrder inputs</li> <li>2. Program asks for preOrder / postOrder input files</li> <li>3. Program outputs: "Error: Invalid file!"</li> <li>4. The program exits without any more errors thrown</li> </ol>	<ol style="list-style-type: none"> <li>1. "Ahnentafel (1) or PreOrder/PostOrder (2)?"</li> <li>2. "Enter your Ahnentafel filename: "</li> <li>3. "Error: File is empty!"</li> </ol>