**Homework 5 Documentation**

Group 23

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**Functions**

**openFile**

attempts to open an inputted file and alerts the user upon success.

**Num**

Takes two numbers upon function call and returns the result of their devision.

**Dist**

Measures the distance between two sets of coordinates, returning the result.

**isPalindrome**

reverses a string and compares the value against the original string to determine if the string is a palindrome

**Divide**

used for taking the input from the user and returning the division of two whole numbers to calculate a result.

**displayItem**

used to display to the user an item at a specific location at an index.

**greetUser**

Used to take input from the user and greet them

**Sq**

Takes the square root of the inputted number and returns the result.

**Testing**

**displayItem**

**test\_displayItem\_correct() –** values tested under expected circumstances.

**Values Tested:** [0,1,2,3],2

**Values Compared Against: N/a**

**Expected Result: Success**

**Test\_displayItem\_badIndex() –** tests against the index being an inappropriate type

**Values Tested:** [0,1,2,3], ‘a’

**Values Compared Against:** N/a

**Expected Result:** Success

**Test\_displayItem\_badNumbers() –** tests that numbers are an inappropriate type

**Values Tested:** 4,0

**Values Compared Against:** N/a

**Expected Result:** Success

**Test\_displayItem\_badSearch() –** tests against searching for an slot not present.

**Values Tested:** [0],1

**Values Compared Against:** N/a

**Expected Result: Success**

**divide**

**test\_divide\_correct(monkeypatch)** – tests to determine whether the function is correctly dividing the inputted digits once the function begins.

**Values Tested:**  3,3

**Values Compared Against:** 1

**Expected Result:** success

**test\_divide\_badType(monkeypatch) –** tests the function for the input of non-integer digits, such as strings or doubles.

**Values Tested:** 5.5, “soup”

**Values Compared Against:** N/A

**Expected Result:** success

**Test\_divide\_byZero(monkeypatch) –** tests to see if the function can correctly halt a test to divide by 0.

**Values Tested:** 0,0

**Values Compared Against:** 0

**Expected Result:** success

**greetUser**

**test\_greetUser\_correct() –** asserts a correct set of inputs to determine whether the intended functionality works.

**Values Tested:** “First”, “Second”, “Third”

**Values Compared Against:** N/A

**Expected Result: success**

**test\_greetUser\_firstBlank –** asserts that the user did not input a first name.

**Values Tested:** None, “Second”, “Third”

**Values Compared Against:**

**Expected Result:** success

**Test\_greetUser\_secondBlank() –** asserts that the user did not input a second name.

**Values Tested:** “First”, None, “Third”

**Values Compared Against:**

**Expected Result:** success

**Test\_greetuser\_thirdBlank() –** asserts that the user did not input a last name.

**Values Tested:** “First”, “Second”, None

**Values Compared Against:**

**Expected Result:** success

**Test\_greetUser\_numbers() –** asserts that the input of the first name is an integer instead of strings.

**Values Tested:** 1, “Second”, “Third”

**Values Compared Against:** N/A

**Expected Result: Success**

**Test\_greetUser\_numbers() –** asserts that the input of the second name is an integer instead of strings.

**Values Tested:** “First”, 2, “Third”

**Values Compared Against:** N/A

**Expected Result:** success

**Test\_greetUser\_numbers() –** asserts that the input of the third name is an integer instead of strings.

**Values Tested:** “First”, “Second”, 3

**Values Compared Against:** N/A

**Expected Result** success

**sq**

**test\_sq\_correct()** – tests the basic functionality of the program by square rooting a number that returns an int.

**Values Tested:** 9

**Values Compared Against:** 3

**Expected Result:** success

**test\_sq\_badInput()** – tests against the user inputting a value other than an integer.

**Values Tested:** “a”

**Values Compared Against:** N/a

**Expected Result:** success

**Test\_sq\_impossible() –** tests against an impossible value.

**Values Tested:**-9

**Values Compared Against:** N/a

**Expected Result:** success

**Test 1**

**DisplayItem**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Correct** | **Bad index** | **Bad numbers** | **Bad search** |
| **Test result** | **Success** | **Fail** | **Fail** | **Fail** |
| **Intended Result** | **Success** | **Success** | **Success** | **Success** |

**Divide**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Correct** | **Bad type** | **By zero** |
| **Test Result** | **Success** | **Fail** | **Fail** |
| **Intended Result** | **Success** | **Success** | **Success** |

**greetUser**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Correct** | **First Blank** | **Second blank** | **Third blank** | **First numbers** | **Second numbers** | **Third numbers** |
| **Test Result** | **Success** | **Fail** | **Fail** | **Fail** | **Fail** | **Fail** | **Fail** |
| **Intended Result** | **success** | **Success** | **Success** | **Success** | **Success** | **Success** | **Success** |

**sq**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Correct** | **bad Input** | **Impossible** |
| **Test Result** | Success | Fail | Fail |
| **Intended Result** | **Success** | **Success** | **Success** |

**Version 2**

**Changes made:**

**Divide –** added try/except cases, including specific cases for ZeroDivisionError, TypeError, and ValueError.

**DisplayItem –** added try/except cases. Including specific cases for TypeError and IndexError.

**greetUser –** added an if/else statement in order to catch any input that may not properly be a string.

**sq –** added try/except cases, including a specific case for TypeError.

**Test 2**

**DisplayItem**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Correct** | **Bad index** | **Bad numbers** | **Bad search** |
| **Test result** | **Success** | **Success** | **Success** | **Success** |
| **Intended Result** | **Success** | **Success** | **Success** | **Success** |

**Divide**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Correct** | **Bad type** | **By zero** |
| **Test Result** | **Success** | **Success** | **Success** |
| **Intended Result** | **Success** | **Success** | **Success** |

**greetUser**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Correct** | **First Blank** | **Second blank** | **Third blank** | **First numbers** | **Second numbers** | **Third numbers** |
| **Test Result** | **Success** | **Success** | **Success** | **Success** | **Success** | **Success** | **Success** |
| **Intended Result** | **success** | **Success** | **Success** | **Success** | **Success** | **Success** | **Success** |

**sq**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Correct** | **bad Input** | **Impossible** |
| **Test Result** | **Success** | **Success** | **Success** |
| **Intended Result** | **Success** | **Success** | **Success** |