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# UC1- Palindrome Test Cases

## 1.1 Verify the input provided forms a valid palindrome

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| **Test Case Name**: Verify the input provided forms a valid palindrome |
| **Test Case Steps:**  **Prerequisites:**   1. PalindromeTest.java file should be created successfully for executing the test cases   **Test Steps:**   1. In the project folder Execute the PalindromeTest class under the package   com.testing.utilities   1. System will prompt the user to enter the value of ‘w’ which is the length of the String. It should not be equal to 0 2. Enter the length of ‘w’ as 20 in the command line arguments and click on Enter 3. System will prompt the user to enter the value of ‘x’ which is the length of the alphabets in the String. It should be less than or equal to ‘w’. 4. Enter the length of ‘x’ as 10 in the command line arguments and click on Enter 5. System will prompt the user to enter the value of ‘y’ which is the length of the numbers in the String. It should be less than or equal than the difference of (w-x). 6. Enter the length of ‘y’ as 6 in the command line arguments and click on Enter 7. System will prompt the user to enter the value of ‘z’ which is the length of the special characters in the String. It should be less than or equal than the difference of (w-x-y). 8. Enter the length of ‘z’ as 4 in the command line arguments and click on Enter   **Expected Result:**  Valid Palindrome should be formed and printed based on the provided inputs.  **Actual Result:**  Valid Palindrome is formed and printed for s the provided inputs. |

## Verify the input provided does not form a palindrome

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| **Test Case Name**: Verify the Input provided does not form a palindrome |

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| **Test Case Steps:**  **Prerequisites:**   1. PalindromeTest.java file should be created successfully for executing the test cases   **Test Steps:**   1. In the project folder Execute the PalindromeTest class under the package   com.testing.utilities   1. System will prompt the user to enter the value of ‘w’ which is the length of the String. It should not be equal to 0 2. Enter the length of ‘w’ as 19 in the command line arguments and click on Enter 3. System will prompt the user to enter the value of ‘x’ which is the length of the alphabets in the String. It should be less than or equal to ‘w’. 4. Enter the length of ‘x’ as 9 in the command line arguments and click on Enter 5. System will prompt the user to enter the value of ‘y’ which is the length of the numbers in the String. It should be less than or equal than the difference of (w-x). 6. Enter the length of ‘y’ as 5 in the command line arguments and click on Enter 7. System will prompt the user to enter the value of ‘z’ which is the length of the special characters in the String. It should be less than or equal than the difference of (w-x-y). 8. Enter the length of ‘z’ as 5 in the command line arguments and click on Enter   **Expected Result:**  Validate the proper error message “Input is not valid to create a Palindrome” when input provided does not form a palindrome.  **Actual Result:**  “Input is not valid to create a Palindrome” error message is validated successfully, when input provided does not form a palindrome. |

## 1.3 Verify the length of W is in the range of 0 to 20

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| **Test Case Name**: Verify the length of w is in the range of 0 to 20. |
| **Test Case Steps:**  **Prerequisites:**   1. PalindromeTest.java file should be created successfully for executing the test cases   **Test Steps:**   1. In the project folder Execute the PalindromeTest class under the package   com.testing.utilities   1. System will prompt the user to enter the value of ‘w’ which is the length of the String. It should not be equal to 0 2. Enter the length of ‘w’ value as (10 or 19 or 1 or 7) in the command line arguments and click on Enter   **Expected Result:**  When user provided the range of value for w (0<w<=20), w value should be stored, and test case should be executed successfully without any error message.  **Actual Result:**  On providing the range of value for w (0<w<=20), w value is stored, and test case is executed successfully without any error message. |

## Verify the message prompted to user when inputted value for w is not in range of (0<w<=20)

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| **Test Case Name:** Verify the message prompted to user when inputted value for w is not in range of (0<w<=20) |
| **Test Case Steps:**  **Prerequisites:**   1. PalindromeTest.java file should be created successfully for executing the test cases   **Test Steps:**   1. In the project folder Execute the PalindromeTest class under the package   com.testing.utilities   1. System will prompt the user to enter the value of ‘w’ which is the length of the String. It should not be equal to 0 2. Enter the length of ‘w’ value other than in the range of 0<w<=20 in the command line arguments and click on Enter   **Expected Result:**  When user provided the value, which is not in the range of (0<w<=20), w value should not be stored, and user should be prompted to enter the correct value ranging from 1 to 20.  **Actual Result:**  On providing the value which is not in the range of (0<w<=20), w value is not stored, and user is prompted to enter the correct value ranging from 1 to 20. |

## 1.5 Verify the length of X is in the range of 0<x<=w

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| **Test Case Name**: Verify the length of X is in the range of 0<x<=w |
| **Test Case Steps:**  **Prerequisites:**   1. PalindromeTest.java file should be created successfully for executing the test cases   **Test Steps:**   1. In the project folder Execute the PalindromeTest class under the package   com.testing.utilities   1. System will prompt the user to enter the value of ‘w’ which is the length of the String. It should not be equal to 0 2. Enter the length of ‘w’ in the range of 0<w<=20 in the command line arguments and click on Enter 3. System will prompt the user to enter the value of ‘x’ which is the length of the alphabets in the String. It should be less than or equal to ‘w’. 4. Enter the length of ‘x’ in the range of 0<x<w in the command line arguments and click on Enter   **Expected Result:**  When user provided the range of value for x (0<x<=w), x value should be stored, and test case should be executed successfully without any error message.  **Actual Result:**    User on providing the value of x in the range(0<x<=w), x value is stored, and test case is executed successfully without any error message. |

## Verify the message prompted to user when inputted value for x is not in range of (0<x<=w)

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| **Test Case Name**: Verify the message prompted to user when inputted value for x is not in range of (0<x<=w) |
| **Test Case Steps:**  **Prerequisites:**   1. PalindromeTest.java file should be created successfully for executing the test cases   **Test Steps:**   1. In the project folder Execute the PalindromeTest class under the package   com.testing.utilities   1. System will prompt the user to enter the value of ‘w’ which is the length of the String. It should not be equal to 0 2. Enter the length of ‘w’ in the range of 0<w<=20 in the command line arguments and click on Enter 3. System will prompt the user to enter the value of ‘x’ which is the length of the alphabets in the String. 4. Enter the length of ‘x’ which is not in the range of 0<x<=w in the command line arguments and click on Enter   **Expected Result:**  When user provided the value of x, which is not in the range of (0<x<=w), x value should not be stored, and user should be prompted to enter the correct value in the range of 0<x<=w  **Actual Result:**  User on providing the value of x, which is not in the range of (0<x<=w), x value is not stored, and user is prompted to enter the correct value in the range of 0<x<=w |

## Verify the length of y is in the range of 0<y<(w-x)

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| **Test Case Name**: Verify the length of Y is in the range of 0<y<=(w-x) |
| **Test Case Steps:**  **Prerequisites:**   1. PalindromeTest.java file should be created successfully for executing the test cases   **Test Steps:**   1. In the project folder Execute the PalindromeTest.java class under the package   com.testing.utilities   1. System will prompt the user to enter the value of ‘w’ which is the length of the String. It should not be equal to 0 2. Enter the length of ‘w’ in the range of 0<w<=20 in the command line arguments and click on Enter 3. System will prompt the user to enter the value of ‘x’ which is the length of the alphabets in the String. It should be less than or equal to ‘w’. 4. Enter the length of ‘x’ in the range of 0<x<=w in the command line arguments and click on Enter 5. System will prompt the user to enter the value of ‘y’ which is the length of the numbers in the String. It should be less than or equal than the difference of (w-x). 6. Enter the length of ‘y’ in the range of 0<y<(w-x) in the command line arguments and click on Enter   **Expected Result:**  When user provided the range of value for y (0<y<=w-x), Y value should be stored, and test case should be executed successfully without any error message.  **Actual Result:**    User on providing the value of y in the range(0<y<=w-x), Y value is stored, and test case is executed successfully without any error message. |

## Verify the message prompted to user when inputted value for Y is not in range of (0<y<=w-x)

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| **Test Case Name**: Verify the message prompted to user when inputted value for Y is not in range of (0<y<=w-x) |
| **Test Case Steps:**  **Prerequisites:**   1. PalindromeTest.java file should be created successfully for executing the test cases   **Test Steps:**   1. In the project folder Execute the PalindromeTest class under the package   com.testing.utilities   1. System will prompt the user to enter the value of ‘w’ which is the length of the String. It should not be equal to 0 2. Enter the length of ‘w’ in the range of 0<w<=20 in the command line arguments and click on Enter 3. System will prompt the user to enter the value of ‘x’ which is the length of the alphabets in the String. 4. Enter the length of ‘x’ in the range of 0<x<=w in the command line arguments and click on Enter 5. System will prompt the user to enter the value of ‘y’ which is the length of the numbers in the String. It should be less than or equal than the difference of (w-x). 6. Enter the length of ‘y’ which is not in the range of 0<y<(w-x) in the command line arguments and click on Enter   **Expected Result:**  When user provided the value of y, which is not in the range of (0<y<=w-x), yvalue should not be stored, and user should be prompted to enter the correct value in the range of 0<y<=w-x  **Actual Result:**  User on providing the value of y, which is not in the range of (0<y<=w-x), y value is not stored, and user is prompted to enter the correct value in the range of 0<y<=w-x |

## 1.9 Verify the length of Z is the difference of w-x-y

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| **Test Case Name**: Verify the length of Z is the difference of w-x-y |
| **Test Case Steps:**  **Prerequisites:**   1. PalindromeTest.java file should be created successfully for executing the test cases   **Test Steps:**   1. In the project folder Execute the PalindromeTest.java class under the package   com.testing.utilities   1. System will prompt the user to enter the value of ‘w’ which is the length of the String. It should not be equal to 0 2. Enter the length of ‘w’ in the range of 0<w<=20 in the command line arguments and click on Enter 3. System will prompt the user to enter the value of ‘x’ which is the length of the alphabets in the String. It should be less than or equal to ‘w’. 4. Enter the length of ‘x’ in the range of 0<x<=w in the command line arguments and click on Enter 5. System will prompt the user to enter the value of ‘y’ which is the length of the numbers in the String. It should be less than or equal than the difference of (w-x). 6. Enter the length of ‘y’ in the range of 0<y<(w-x) in the command line arguments and click on Enter 7. System will prompt the user to enter the value of ‘z’ which is the length of the numbers in the String. It should be equal to the difference of (w-x-y). 8. Enter the length of ‘z’ which is the difference of (w-x=y) in the command line arguments and click on Enter   **Expected Result:**  When user provided the value for Z which is the difference of (w-x-y), Z value should be stored, and test case should be executed successfully without any error message.  **Actual Result:**    User on providing the value for Z which is the difference of (w-x-y), Z value is stored, and test case is executed successfully without any error message. |

## 1.10 Verify the message prompted to the user when the value of z is not the difference of (w-x-y)

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| **Test Case Name**: Verify the message prompted to the user when the value of Z is not the difference of (w-x-y) |
| **Prerequisites:**   1. PalindromeTest.java file should be created successfully for executing the test cases   **Test Steps:**   1. In the project folder Execute the PalindromeTest.java class under the package   com.testing.utilities   1. System will prompt the user to enter the value of ‘w’ which is the length of the String. It should not be equal to 0 2. Enter the length of ‘w’ in the range of 0<w<=20 in the command line arguments and click on Enter 3. System will prompt the user to enter the value of ‘x’ which is the length of the alphabets in the String. It should be less than or equal to ‘w’. 4. Enter the length of ‘x’ in the range of 0<x<=w in the command line arguments and click on Enter 5. System will prompt the user to enter the value of ‘y’ which is the length of the numbers in the String. It should be less than or equal than the difference of (w-x). 6. Enter the length of ‘y’ in the range of 0<y<(w-x) in the command line arguments and click on Enter 7. System will prompt the user to enter the value of ‘z’ which is the length of the numbers in the String. It should be equal to the difference of (w-x-y). 8. Enter the length of ‘z’, other than the difference of (w-x=y) in the command line arguments and click on Enter   **Expected Result:**  When user provided the value of z, which is not the difference of w-x-y, Z value should not be stored, and user should be prompted to enter the correct value which is the difference of w-x-y.  **Actual Result:**  User on providing the value of z, which is not the difference of w-x-y, Z value is not stored, and user is prompted to enter the correct value to enter the correct value which is the difference of w-x-y. |