**Test Plan**

**Features to be tested**

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| **FEATURE** | **DESCRIPTION** |
| To check if the plain text letters are correctly spilt in two letters. | The letters in pain text or cipher text have to be split into two letters exactly referred as a diagram according to algorithm. |
| If a matrix of 5x5 has been formed according to rules of the algorithm. | A matrix of 5x5 is formed and filled first with alphabets of the keyword and followed by the rest of the alphabets. |
| To check if repeated letters are replaced with X or O etc. | If the plain text consists of any repeated letters, then before forming a pair an extra alphabet like an X or O etc is added to avoid repetition in the cipher text with can be detected. |

Table 1: Features to be tested.

**Test cases**

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| **TEST CASE ID** | **SCENARIO** | **DATA/INPUT** |
| 1 | Checking if the plain text letters are split exactly in a pair (diagram/two letter). | * MONKEY   MO NK EY   * SYSTEM   SY ST EM |
| 2 | To check if repeated letters in data is replaced with X or O etc. | * BALLOON   BA L**X** LO ON |
| 3 | Test for large keyword. | * Indian Premier League * Joint implementation opportunities |
| 4 | Check for cases where two letters are in same row/column. |  |
| 5 | Checking if the 5x5 matrix is filled first with keyword and followed by leftover alphabets. |  |
| 6 | Testing for various random inputs | * Keyword: Monarchy   Plain text: Balloon  Cipher text: ibsupman |

Table 2: Test cases.

**Expected Results**

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| --- | --- |
| **TEST CASE ID** | **RESULT TO BE EXPECTED** |
| 1 | Keyword: “MONARCHY “  Plain text: “MONKEY “  Letters split as follows:  MO NK EY  Cipher text: “NORGGC” |
| 2 | Keyword: “MONARCHY”  Pain text: “BALLOON “  Letters split as follows:  BA LX LO ON  Cipher text: “IBSUPMAN” |
| 6 | Keyword: “KEYWORD”  Plaintext : “COME TO THE WINDOW ”  CO ME TO TH EW IN DO WX  Cipher text:“LCNKZKVFYOGQCEBX” |

Table 3: Expected results.