

Task 2:

Instructions for Encrypting a Text Using Playfair cipher

1- Prepare the Matrix:

Construct the Playfair cipher matrix using the keyword "DRHATIM".

2- Encrypt the Text:

Divide the text into digraphs (pairs of two letters). If a pair consists of the same letter (e.g., "LL"), insert an "X" between them (making it "LX" and "L"). If there's an odd letter left, add an "X" at the end.

3- Apply the Playfair Rules:

- 1- Use the Playfair cipher rules to encrypt each digraph:
 - i) If both letters are in the same row, replace them with letters to their immediate right.
 - ii) If both letters are in the same column, replace them with letters immediately below.
 - iii) If the letters form a rectangle, replace them with letters on the same row but at the opposite corners.

Plaintext:

The Little Seed Journey

Once upon a time in a lush green garden there lived tiny seeds. These seeds dreamed of becoming beautiful flowers but they were afraid. What if I am not strong enough to grow What if I do not succeed They often thought about this.

One sunny morning the gardener came and gently planted the seeds in rich warm soil. The seeds felt scared but also excited. Days went by and the seeds began to sprout. They felt the warmth of the sun and the coolness of the rain. However they also faced challenges strong winds heavy rains and a curious squirrel now and then.

Whenever something difficult happened the seeds thought about giving up. Maybe I should just stay small and hidden they whispered to themselves. But then they remembered the warmth of the sun and the support of the soil around them.

With each passing day the seeds grew stronger. They pushed through the soil reaching for the light. Soon they had grown into lovely plants with vibrant green leaves. As time went on the plants blossomed into magnificent flowers their colors bright and cheerful.

One day a little girl walked by and said what a beautiful flower You have brightened my day The flowers realized that they had not only grown but had also brought joy to others.

The flowers then understood the important lesson challenges are part of the journey but perseverance leads to beauty and happiness They learned that stepping out of their comfort zone and facing fears could lead to wonderful things. And so the little seeds became beautiful flowers inspiring others to grow and embrace their own journeys.

Message

No matter how small or afraid you may feel embrace your journey and face challenges with courage You have the potential to bloom beautifully