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UID:	2022301015
BATCH:	BE COMPS A BATCH VIII

1. Rail Fence Cipher

Plain text – BELIEVE IN YOUR STRENGTH AND RESILIENCE. EVERY SETBACK IS A SETUP FOR A COMEBACK. EMBRACE CHALLENGES AS OPPORTUNITIES TO GROW AND LEARN. KEEP YOUR VISION CLEAR, STAY PERSISTENT, AND TRUST THE PROCESS. YOUR HARD WORK AND DEDICATION WILL LEAD YOU TO SUCCESS. KEEP MOVING FORWARD—YOU'RE CLOSER THAN YOU THINK!

Cipher text- BCDOE HN FRLEAAT WICL RGAEAL,UNRVRETSIDEBNNTV MGE OIEETTMN SSH Y . IEPOYKAS EUOCSRPE'UA ERKRRBOPO E EP C. SMPYESCTOOASSLRCRTSEOE TS.CSNAU CEG N,YURTRIROS HOTAU T FIEROHA EL TANPSCH NDU AU TTNROYREOODYOES I US GSWD IARIOATL OVREHISW KLIEI R NN AUALKCKNONL!ECDYDI.A   W BLPD ETEEENVEAEDOESRKIIR N CTY.A

Key: 46

Attack:

```
Depth 4:
wuoy__eoH_ar

Depth 5:
wurH_ao_eo_y

Depth 6:
wur_a_yHo_eo

Depth 7:
we_r_a_yHoou

Depth 8:
weu_r_a_yHoo
```

2. Row column cipher

Plain text – BELIEVE IN YOUR STRENGTH AND RESILIENCE. EVERY SETBACK IS A SETUP FOR A COMEBACK. EMBRACE CHALLENGES AS OPPORTUNITIES TO GROW AND LEARN. KEEP YOUR VISION CLEAR, STAY PERSISTENT, AND TRUST THE PROCESS. YOUR HARD WORK AND DEDICATION WILL LEAD YOU TO SUCCESS. KEEP MOVING FORWARD—YOU'RE CLOSER THAN YOU THINK!

Cipher text - B RG EVTSUAABHEPIOARPVCSRTTHEU NCWATEENAOLH EI TRNEB P CRASPT NN ILTS,RESRWDAIDOSPGRUOATI T SEYC FO.CLARER OIAYSASP.HRDILYS.MFâRE IEUNDIEEIT BMCGONT AE   EN TCODAI E CEIWYCTU!LNSHECRAA CKAL OIGD.YSEAI U S O TL S D'SNHEYRAI. KSOM EESTSOLKUOR TNTR AKEO OU OO€ERYNVOENL S EREE N U WEERN,PED OYR DNLUCKVR

Key: 1253674

```
® USER on ▪ D:/Shubham/College/SPIT/Semester 7/css/exp/exp2/transposition-techniques-2022301015/row-column-ciphe
r
● # python row-column-cipher.py
What do you want to do?
1. Encrypt
2. Decrypt
Your choice: 1
Encryption completed successfully.

Encrypted text:  B RG EVTSUAABHEPIOARPVCSRTTHEU NCWATEENAOLH EI TRNEB P CRASPT NN ILTS,RESRWDAIDOSPGRUOATI T SEY
C FO.CLARER  OIAYSASP.HRDILYS.MFâRE IEUNDIEEIT BMCGONT AE   EN TCODAI E CEIWYCTU!LNSHECRAA CKAL OIGD.YSEAI U S O TL  S  D
'SNHEYRAI. KSOM EESTSOLKUOR TNTR AKEO OU OO€ERYNVOENL S EREE N U WEERN,PED OYR DNLUCKVR"  OK
® USER on ▪ D:/Shubham/College/SPIT/Semester 7/css/exp/exp2/transposition-techniques-2022301015/row-column-cipher
# python row-column-cipher.py
● What do you want to do?
1. Encrypt
2. Decrypt
Your choice: 2
Decryption completed successfully.

Decrypted text:  BELIEVE IN YOUR STRENGTH AND RESILIENCE. EVERY SETBACK IS A SETUP FOR A COMEBACK. EMBRACE CHALLENGES AS
OPPORTUNITIES TO GROW AND LEARN. KEEP YOUR VISION CLEAR, STAY PERSISTENT, AND TRUST THE PROCESS. YOUR HARD WORK AND DEDIC
ATION WILL LEAD YOU TO SUCCESS. KEEP MOVING FORWARDâ€"YOU'RE CLOSER THAN YOU THINK!
® USER on ▪ D:/Shubham/College/SPIT/Semester 7/css/exp/exp2/transposition-techniques-2022301015/row-column-cipher
```

Attack:

```
® USER on ▪ D:/Shubham/College/SPIT/Semester 7/css/exp/exp2/transposition-techniques-attack-2022301015/row-
column-cipher
● # python attack.py
Attack completed successfully.
® USER on ▪ D:/Shubham/College/SPIT/Semester 7/css/exp/exp2/transposition-techniques-attack-2022301015/row-
column-cipher
# 
```

```
Key: 213
Decrypted Text: owHreaouy

Key: 231
Decrypted Text: oHwraeoyu

Key: 312
Decrypted Text: Hwoaeryuo

Key: 321
Decrypted Text: Howareyou

Key: 1234
Decrypted Text: w_oaeo_yu

Key: 1243
Decrypted Text: w_aoeoy_u

Key: 1324
```

3. Double Row Column Cipher

Plain text – BELIEVE IN YOUR STRENGTH AND RESILIENCE. EVERY SETBACK IS A SETUP FOR A COMEBACK. EMBRACE CHALLENGES AS OPPORTUNITIES TO GROW AND LEARN. KEEP YOUR VISION CLEAR, STAY PERSISTENT, AND TRUST

THE PROCESS. YOUR HARD WORK AND DEDICATION WILL LEAD YOU TO SUCCESS. KEEP MOVING FORWARD—YOU'RE CLOSER THAN YOU THINK!

Cipher text – BTEVETHNRNRIU ORSDFUTN DE!RLY SI LNO€ER P V SPCUE EA EDOS. AIâN TEAILA SS N.EKT ENEWEDRGAORNNI PLRSTYLOPYEIMA YS IAO EKSO UY E L VHPHALRCN,ARTFEYRMEIO OCUCA.UL'AMOTEOOEU,RKKRUIS EEBSISOAEC SLRDB NIWNAOE SH EURORLEEDN" AATCA PTTWPICAI.S ECETECHCGI YSTRA NSNROU EBRTWOT SDG RAH.IEG C TEKD TDROS KOV NYCO

Key: 1253674

```
® USER on ▪ D:/Shubham/College/SPIT/Semester 7/css/exp/exp2/transposition-techniques-2022301015/double-row-colum
n-cipher
● # python double-row-column.py
What do you want to do?
1. Encrypt
2. Decrypt
Your choice: 1
Encryption completed successfully.

Encrypted text:  BTEVETHNRNRIU ORSDFUTN DE!RLY  SI LNO€ER P V SPCUE EA EDOS. AIâN TEAILA SS N.EKT ENEWEDRGAORNNI
 PLRSTYLOPYEIMA  YS IAO EKSO UY  E L VHPHALRCN,ARTFEYRMEIO OCUCA.UL'AMOTEOOEU,RKKRUIS EEBSISOAEC SLRDB NIWNAOE S
H EURORLEEDN" AATCA PTTWPICAI.S ECETECHCGI  YSTRA NSNROU EBRTWOT  SDG  RAH.IEG C TEKD TDROS KOV  NYCO
○® USER on ▪ D:/Shubham/College/SPIT/Semester 7/css/exp/exp2/transposition-techniques-2022301015/double-row-colum
n-cipher
# ▮
```

```
® USER on ▪ D:/Shubham/College/SPIT/Semester 7/css/exp/exp2/transposition-techniques-2022301015/double-row-colum
n-cipher
# python double-row-column.py
What do you want to do?
1. Encrypt
2. Decrypt
Your choice: 2
Decryption completed successfully.

Decrypted text:  BELIEVE IN YOUR STRENGTH AND RESILIENCE. EVERY SETBACK IS A SETUP FOR A COMEBACK. EMBRACE CHALL
ENGES AS OPPORTUNITIES TO GROW AND LEARN. KEEP YOUR VISION CLEAR, STAY PERSISTENT, AND TRUST THE PROCESS. YOUR H
ARD WORK AND DEDICATION WILL LEAD YOU TO SUCCESS. KEEP MOVING FORWARDâ€"YOU'RE CLOSER THAN YOU THINK!
® USER on ▪ D:/Shubham/College/SPIT/Semester 7/css/exp/exp2/transposition-techniques-2022301015/double-row-colum
n-cipher
# ▮
```

Attack:

```
® USER on ▪ D:/Shubham/College/SPIT/Semester 7/css/exp/exp2/transposition-techniques-attack-2022301015
# python attack.py
Attack completed successfully.
```

Part 3: Plotting: Normalized Character Frequency Comparison by Frequency Rank

Normalized Character Frequency Comparison for Double Row Column Transposition Cipher

Normalized Character Frequency Comparison for Rail Fence Cipher

Normalized Character Frequency Comparison for Row Column Transposition Cipher