Caesar Cipher:

```
PS C:\Users\aspur\OneDrive\CSS\2021300101 - EXP_1\2021300101 - EXP_1> python -u "c:\Users\aspur\OneDrive\CSS\2021300101 - EXP_1\2021300101 - EXP_1\substitution-techniques-attack-2021300089\caesar_cipher_attack.py"
kwcop ivl kwtl
jvbno huk jvsk
iuamn gtj iurj
htzlm fsi htqi
gsykl erh gsph
frxjk dqg frog
eqwij cpf eqnf
dpvhi boe dpme
cough and cold
bntfg zmc bnkc
amsef ylb amjb
zlrde xka zlia
ykqcd wjz ykhz
xjpbc viy xjgy
wioab uhx wifx
vhnza tgw vhew
ugmyz sfv ugdv
tflxy reu tfcu
sekwx qdt sebt
rdjvw pcs rdas
qciuv obr qczr
pbhtu naq pbyq
oagst mzp oaxp
nzfrs lyo nzwo
myeqr kxn myvn
lxdpq jwm lxum
PS C:\Users\aspur\OneDrive\CSS\2021300101 - EXP_1\2021300101 - EXP_1>
```

Hill Cipher:

```
PS C:\Users\aspur\OneDrive\CSS\2021300101 - EXP_1\2021300101 - EXP_1> python -u "c:\Users\aspur\OneDrive\CSS\2021300101 - EXP_1\2021300101 - EXP_1\substitution-techniques-attack-2021300089\hill_attack.py"
Brute-forcing...
Trying matrix: [[0, 1], [1, 0]] - Decrypted Text: FGIWPQQG
Trying matrix: [[0, 1], [1, 1]] - Decrypted Text: FLIEPFQW
Trying matrix: [[0, 1], [1, 2]] - Decrypted Text: FQIMPUQM
Trying matrix: [[0, 1], [1, 3]] - Decrypted Text: FVIUPJQC
Trying matrix: [[0, 1], [1, 4]] - Decrypted Text: FAICPYQS
Trying matrix: [[0, 1], [1, 5]] - Decrypted Text: FFIKPNQI
Trying matrix: [[0, 1], [1, 6]] - Decrypted Text: FKISPCQY
Trying matrix: [[0, 1], [1, 7]] - Decrypted Text: FPIAPRQO
Trying matrix: [[0, 1], [1, 8]] - Decrypted Text: FUIIPGQE
Trying matrix: [[0, 1], [1, 9]] - Decrypted Text: FZIQPVQU
Trying matrix: [[0, 1], [1, 10]] - Decrypted Text: FEIYPKQK
Trying matrix: [[0, 1], [1, 11]] - Decrypted Text: FJIGPZQA
Trying matrix: [[0, 1], [1, 12]] - Decrypted Text: FOIOPOQQ
Trying matrix: [[0, 1], [1, 13]] - Decrypted Text: FTIWPDQG
Trying matrix: [[0, 1], [1, 14]] - Decrypted Text: FYIEPSQW
Trying matrix: [[0, 1], [1, 15]] - Decrypted Text: FDIMPHQM
Trying matrix: [[0, 1], [1, 16]] - Decrypted Text: FIIUPWQC
Trying matrix: [[0, 1], [1, 17]] - Decrypted Text: FNICPLQS
Trying matrix: [[0, 1], [1, 18]] - Decrypted Text: FSIKPAQI
Trying matrix: [[0, 1], [1, 19]] - Decrypted Text: FXISPPQY
Trying matrix: [[0, 1], [1, 20]] - Decrypted Text: FCIAPEQO
Trying matrix: [[0, 1], [1, 21]] - Decrypted Text: FHIIPTQE
Trying matrix: [[0, 1], [1, 22]] - Decrypted Text: FMIQPIQU
Trying matrix: [[0, 1], [1, 23]] - Decrypted Text: FRIYPXQK
Trying matrix: [[0, 1], [1, 24]] - Decrypted Text: FWIGPMQA
Trying matrix: [[0, 1], [1, 25]] - Decrypted Text: FBIOPBQQ
Trying matrix: [[0, 1], [3, 0]] - Decrypted Text: FSIOPWQS
Trying matrix: [[0, 1], [3, 1]] - Decrypted Text: FXIWPLQI
Trying matrix: [[0, 1], [3, 2]] - Decrypted Text: FCIEPAQY
Trying matrix: [[0, 1], [3, 3]] - Decrypted Text: FHIMPPQO
Trying matrix: [[0, 1], [3, 4]] - Decrypted Text: FMIUPEQE
Trying matrix: [[0, 1], [3, 5]] - Decrypted Text: FRICPTQU
```

Monoalphabetic Cipher:

```
PS C:\Users\aspur\OneDrive\CSS\2021300101 - EXP_1\2021300101 - EXP_1> python -u "c:\Users\aspur\OneDrive\CSS\2021300101 - EXP_1\2021300101 - EXP_1\substitution-techniques-attack-2021300089\mon
oalphabetic_attack.py"
Possible plaintext combinations:
1. ieten aets eho tarot
2. ntats otah tri aodia
3. saoah iaor adn oilno
4. hoior noid ols incsi
5. rinid sinl ich nsuhn
6. dnsnl hnsc nur shmrs
7. lshsc rshu smd hrwdh
8. chrhu dhrm hwl rdflr
9. urdrm lrdw rfc dlgcd
10. mdldw cdlf dgu lcyul
11. wlclf ulcg lym cupmc
12. fcucg mcuy cpw umbwu
13. gumuy wump ubf mwvfm
14. ymwmp fmwb mvg wfkgw
15. pwfwb gwfv wky fgjyf
16. bfgfv yfgk fjp gyxpg
17. vgygk pgyj gxb ypqby
18. kypyj bypx yqv pbzvp
19. jpbpx vpbq pzk bvekb
20. xbvbq kbvz bej vktjv
21. qvkvz jvke vtx kjaxk
22. zkjke xkjt kaq jxoqj
23. ejxjt qjxa joz xqizx
24. txqxa zxqo xie qzneq
25. aqzqo eqzi qnt zestz
26. ozezi tzen zsa ethae
27. ieten aets eho tarot
28. ntats otah tri aodia
29. saoah iaor adn oilno
30. hoior noid ols incsi
31. rinid sinl ich nsuhn
32. dnsnl hnsc nur shmrs
33. lshsc rshu smd hrwdh
34. chrhu dhrm hwl rdflr
35. urdrm lrdw rfc dlgcd
36. mdldw cdlf dgu lcyul
37. wlclf ulcg lym cupmc
38. fcucg mcuy cpw umbwu
39. gumuy wump ubf mwvfm
40. ymwmp fmwb mvg wfkgw
41. pwfwb gwfv wky fgjyf
42. bfgfv yfgk fjp gyxpg
43. vgygk pgyj gxb ypqby
44. kypyj bypx yqv pbzvp
45. jpbpx vpbq pzk bvekb
46. xbvbq kbvz bej vktjv
47. qvkvz jvke vtx kjaxk
48. zkjke xkjt kaq jxoqj
49. ejxjt qjxa joz xqizx
50. txqxa zxqo xie qzneq
51. aqzqo eqzi qnt zestz
52. ozezi tzen zsa ethae
53. ieten aets eho tarot
54. ntats otah tri aodia
55. saoah iaor adn oilno
56. hoior noid ols incsi
57. rinid sinl ich nsuhn
58. dnsnl hnsc nur shmrs
59. lshsc rshu smd hrwdh
60. chrhu dhrm hwl rdflr
61. urdrm lrdw rfc dlgcd
62. mdldw cdlf dgu lcyul
63. wlclf ulcg lym cupmc
64. fcucg mcuy cpw umbwu
65. gumuy wump ubf mwvfm
66. ymwmp fmwb mvg wfkgw
67. pwfwb gwfv wky fgjyf
68. bfgfv yfgk fjp gyxpg
69. vgygk pgyj gxb ypqby
70. kypyj bypx yqv pbzvp
71. jpbpx vpbq pzk bvekb
72. xbvbq kbvz bej vktjv
73. qvkvz jvke vtx kjaxk
74. zkjke xkjt kaq jxoqj
75. ejxjt qjxa joz xqizx
76. txqxa zxqo xie qzneq
77. aqzqo eqzi qnt zestz
78. ozezi tzen zsa ethae
79. ieten aets eho tarot
80. ntats otah tri aodia
81. saoah iaor adn oilno
82. hoior noid ols incsi
83. rinid sinl ich nsuhn
84. dnsnl hnsc nur shmrs
85. lshsc rshu smd hrwdh
86. chrhu dhrm hwl rdflr
87. urdrm lrdw rfc dlgcd
88. mdldw cdlf dgu lcyul
89. wlclf ulcg lym cupmc
90. fcucg mcuy cpw umbwu
91. gumuy wump ubf mwvfm
92. ymwmp fmwb mvg wfkgw
93. pwfwb gwfv wky fgjyf
94. bfgfv yfgk fjp gyxpg
95. vgygk pgyj gxb ypqby
96. kypyj bypx yqv pbzvp
97. jpbpx vpbq pzk bvekb
98. xbvbq kbvz bej vktjv
99. qvkvz jvke vtx kjaxk
100. zkjke xkjt kaq jxoqj
PS C:\Users\aspur\OneDrive\CSS\2021300101 - EXP_1\2021300101 - EXP_1>
```

Playfair attack:

```
PS C:\Users\aspur\OneDrive\CSS\2021300101 - EXP_1\2021300101 - EXP_1> python -u "c:\Users\aspur\OneDrive\CSS\20213
00101 - EXP_1\2021300101 - EXP_1\substitution-techniques-attack-2021300089\playfair_attack.py"
Key: secret -> Decrypted Text: dmrieapffitclbgw
Key: playfair -> Decrypted Text: ehgpqctbraocdpdw
Key: example -> Decrypted Text: niueqdsblfrqncfv
Key: keyword -> Decrypted Text: feogqcnbcimchlcx
Key: random -> Decrypted Text: lifkqctafhpnlcfw
Key: monarch -> Decrypted Text: fireintheiunglex
PS C:\Users\aspur\OneDrive\CSS\2021300101 - EXP 1\2021300101 - EXP 1>
```

Polyalphabetic Cipher :

```
PS C:\Users\aspur\OneDrive\CSS\2021300101 - EXP_1\2021300101 - EXP_1> python -u "c:\Users\aspur\OneDrive\CS
S\2021300101 - EXP_1\2021300101 - EXP_1\substitution-techniques-attack-2021300089\polyalphabetic_attack.py"
Testing key "A": lxmpu
Testing key "B": kwlot
Testing key "C": jvkns
Testing key "D": iujmr
Testing key "E": htilq
Testing key "F": gshkp
Testing key "G": frgjo
Testing key "H": eqfin
Testing key "I": dpehm
Testing key "J": codgl
Testing key "K": bncfk
Testing key "L": ambej
Testing key "M": zladi
Testing key "N": ykzch
Testing key "O": xjybg
Testing key "P": wixaf
Testing key "Q": vhwze
Testing key "R": ugvyd
Testing key "S": tfuxc
Testing key "T": setwb
Testing key "U": rdsva
Testing key "V": qcruz
Testing key "W": pbqty
Testing key "X": oapsx
Testing key "Y": nzorw
Testing key "Z": mynqv
```

```
Testing key "ZYZ": mznqw
Testing key "ZZA": mymqv
Testing key "ZZB": mylqv
Testing key "ZZC": mykqv
Testing key "ZZD": myjqv
Testing key "ZZE": myiqv
Testing key "ZZF": myhqv
Testing key "ZZG": mygqv
Testing key "ZZH": myfqv
Testing key "ZZI": myeqv
Testing key "ZZJ": mydqv
Testing key "ZZK": mycqv
Testing key "ZZL": mybqv
Testing key "ZZM": myaqv
Testing key "ZZN": myzqv
Testing key "ZZO": myyqv
Testing key "ZZP": myxqv
Testing key "ZZQ": mywqv
Testing key "ZZR": myvqv
Testing key "ZZS": myuqv
Testing key "ZZT": mytqv
Testing key "ZZU": mysqv
Testing key "ZZV": myrqv
Testing key "ZZW": myqqv
Testing key "ZZX": mypqv
Testing key "ZZY": myoqv
Testing key "ZZZ": mynqv
 PS C:\Users\aspur\OneDrive\CSS\2021300101 - EXP_1\2021300101 - EXP_1>
```