

Sample input:

```
POKEMON TOWER DEFENSE
YOUR MISSION IN THIS FUN STRATEGY TOWER DEFENSE GAME IS TO HELP PROFESSOR OAK
TO STOP ATTACKS
OF WILD RATTATA. SET OUT ON YOUR OWN POKEMON JOURNEY, TO CATCH AND TRAIN ALL
POKEMON AND
TRY TO SOLVE THE MYSTERY BEHIND THESE ATTACKS. YOU MUST PLACE POKEMON
CHARACTERS
STRATEGICALLY ON THE BATTLEFIELD SO THAT THEY STOP ALL WAVES OF ENEMY
ATTACKER
DURING THE BATTLE YOU WILL LEVEL UP AND EVOLVE YOUR POKEMON. YOU CAN ALSO
CAPTURE OTHER
POKEMON DURING THE BATTLE AND ADD THEM TO YOUR TEAM. USE YOUR MOUSE TO PLAY
THE GAME.
GOOD LUCK
```

Sample output:

*** PLAYFAIR CIPHER ***

Key Matrix:

R A Y Q U

Z B C D E

F G H I K

L M N O P

S T V W X

Encrypted:

LPPKNPMVWQZUEZKZLVCUPQALFWSTOWOHMVIKRLYP TVAYXBHAWMXDQZZKCPXZMBPBFWWMKCML
UXQLKZT SWLQLUGWMTVPLBASVYBFXLIQOOZAYVSABABXZWMAXPOQNRAWQOLPIBPPOQLRAPCAVND
BAHNYMBWAYHORMSPLPPKNPMYOCSA AVLWPMXCVGBPRVXBAQCZIKOCVGZXBUVSABEHVRPQPATVLM
YBKXPIBPPOHNYAYBXBZRSTSABABKHDRMSPQNMVKGBVSSMZKKDOZWLVBASVKCRVWMMUPSOSYTZ
XLICBPBPQYVSABEHZUEQQFMHVGZCBASVPZQNQXFOSPCXZPEXYMEZWNNSCUPQULPIBPPOQNYEYMR
MWLBYMXRADPVGZULPPKNPOCRAHOMAKCGBVSSMBUOCQBWEVGBPWMQNRAXBTRXCUPQALPQXZ
WMLMYQVGBKBTBKPWWIPREH

Decrypted:

POKEMON TOWER DEFENSE YOUR MISXSION IN THIS FUN STRATEGY TOWER DEFENSE GAME IS TO HELPXPROFE
SXSOROAKTOSTOPATXTACKSOFWILDRATXTATASETOUTONYOUROWNPOKEMONROURNEYTOCATCHAN
DTRAINALXLPOKEMONANDTRYTOSOLVETHEMYSTERYBEHINDTHESEATXTACKSYOUMUSTPLACEPOKEMO
NCHARACTERSXSTRATEGICALXLYONTHEBATXTLEFIELDSOTHATXTHEYSTOPALXLWAVESOFENEMYATXTAC
KERDURINGTHEBATXTLEYOUWILXLXLEVELUPANDEVOLVEYOURPOKEMONYOUCANALSO CAPTUREOTHER
POKEMONDURINGTHEBATXTLEANDADXDTHEMTOYOURTEAMUSEYOURMOUSE TOPLAYTHEGAMEGOXO
DLUCK

*** MATRIX TRANSPOSITION CIPHER ***

Ciphertext:

TNSHRE%OF%TIA%W%TNL%%EE%PMTG%ETSAEEHYEDON%UOITD%.%PAU%MDRIN%EI%%OOT%UEEC
IEY%RTCUPARYA%HLFTNTLPVK%CH%ENMTY%HO%OE%N%TNSPOPFTORMYHNM%TYHKSORA%TSEL%A
GLL%EECAED%D%EOTED%OSSIARG%ETTL.ONJODLASMH%YLOEITFHTVMREOV%U.ARKNTDY%MLMC%E
%U%UYF%PRTSATOKNTAKREE%AM%HTLBDAOTITIULOU%TNHAE%%ETO%OEYO%EDMES%C%S%PUCT
PDLSENTUC%SAEETPS%UB%LV%YS%M%ETUSUY.%PWEIST%AHSOAD%N%O%%%NOYIAOANRCHIAOEYD%
UEER%LEEGL%OUOAEKKRONFGEELOSKREYORAROTVTD%ECSL%L%%%ARAW%OPOOOOT%HRES%G%N
FM%SOS%RA%%AU%O,%%OTH%ESTKATOTOY%EC%E%A%MAPRUB%TAUO%%%%EITTWETOKAWTTON
%AANOEB%.%ECENL%%WNKT%LNYONTPRAAOMR%GL%

Plaintext:

POKEMON%TOWER%DEFENSEYOUR%MISSION%IN%THIS%FUN%STRATEGY%TOWER%DEFENSE%GAME
%IS%TO%HELP%PROFESSOR%OAK%TO%STOP%ATTACKSOF%WILD%RATTATA.%SET%OUT%ON%YOUR%
OWN%POKEMON%JOURNEY,%TO%CATCH%AND%TRAIN%ALL%POKEMON%ANDTRY%TO%SOLVE%THE
%MYSTERY%BEHIND%THESE%ATTACKS.%YOU%MUST%PLACE%POKEMON%CHARACTERSSTRATEGICALL
Y%ON%THE%BATTLEFIELD%SO%THAT%THEY%STOP%ALL%WAVES%OF%ENEMY%ATTACKERDURING%T
HE%BATTLE%YOU%WILL%LEVEL%UP%AND%EVOLVE%YOUR%POKEMON.%YOU%CAN%ALSO%CAPTURE
%OTHERPOKEMON%DURING%THE%BATTLE%AND%ADD%THEM%TO%YOUR%TEAM.%USE%YOUR%MO
USE%TO%PLAY%THE%GAME.GOOD%LUCK%%%%%%%%%

Sample input:

MEET AT MILITARY HOUSE

Sample output:

*** PLAYFAIR CIPHER ***

Key Matrix:

R A Y Q U

Z B C D E

F G H I K

L M N O P

S T V W X

Encrypted: PBUKABATFOGWYACNPQXZ

Decrypted: MEXETATMILITARYHOUSE

*** MATRIX TRANSPOSITION CIPHER ***

Ciphertext: MO%%R%AY%IU%TA%EIEMLSET%T%%H%

Plaintext: MEET%AT%MILITARY%HOUSE%%%%%%%%

Sample input:

COME QUICKLY WE NEED HELP

Sample output:

*** PLAYFAIR CIPHER ***

Key Matrix:

R A Y Q U

Z B C D E

F G H I K

L M N O P

S T V W X

Encrypted: DNPBURHDFPQVCPKUZEKML

Decrypted: COMEQUICKLYWENEXEDHELP

*** MATRIX TRANSPOSITION CIPHER ***

Ciphertext: CE%%EPQ%%KD%EWLOYHCL%M%EUN%IE%

Plaintext: COME%QUICKLY%WE%NEED%HELP%%%%%%%%