

# **SIMPLE EDITOR**

*Mini project report submitted at the end of fourth semester in partial fulfillment of the requirement for the award of the degree of*

## **BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING**

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**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING  
RAGHU ENGINEERING COLLEGE**

**(Autonomous)**

**Affiliated to JNTU-Kakinada**

**Dakamarri (V), Bheemunipatnam (M),**

**Visakhapatnam – 531162**

**2020**

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**Visakhapatnam**



### **CERTIFICATE**

This is to certify that this project entitled “**Encrypted Square**” done by **G.Chandralekha, B. Hemanth Varma, G. Mounika, G.V. Sai Charan Krishna Yadav** bearing Regd. No: **18981A0542, 18981A0527, 18981A0543, 18981A0551** during the academic year 2019-2020 in partial fulfillment of the requirements for the completion of 2<sup>nd</sup> year of **Bachelor of Technology in Computer Science And Engineering**, under the supervision of **Mr. P.Anil Kumar, B.Tech, CSE**.

**Internal Guide**

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### **EXTERNAL EXAMINER**

### **DECLARATION**

This is to certify that this project titled “**Encrypted Square**” is bonafide work done by us, in partial fulfilment of the requirements for the completion of 2<sup>nd</sup> year of the degree B.Tech and submitted to the Department of Computer Science & Engineering, Raghu Engineering College, Dakamarri.

We also declare that this project is a result of our own effort and that has not been copied from anyone and we have taken only citations from the sources which are mentioned in the references.

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# ABSTRACT

Encrypted Square is a classic method for composing secret messages called a square code. Given an English text, the encoded version of that text will be resulted as the output. The spaces and punctuation are removed from the English text and the message is down cased. Then, the normalized characters are broken into rows and are written into a square (or rectangle). The coded message is obtained by reading down the columns. It is a code which is useful to send the messages from one place to another place safely without hacking. It is very useful for company purpose as it can't be hacked by anyone. we implemented this square code with the use of python.

# INTRODUCTION

In cryptography, **encryption** is the process of encoding information. This process converts the original representation of the information, known as plaintext, into an alternative form known as cipher text. Ideally, only authorized parties can decipher a cipher text back to plaintext and access the original information. Encryption does not itself prevent interference but denies the intelligible content to a would-be interceptor. For technical reasons, an encryption scheme usually uses a pseudo-random encryption key generated by an algorithm. It is possible to decrypt the message without possessing the key, but, for a well-designed encryption scheme, considerable computational resources and skills are much required.



# **SYSTEM SPECIFICATIONS**

**Minimum system requirements which are used in the project development and to run the system,**

**Hardware Requirements:**

- **Speed:** 2.80 GHz
- **Primary memory:** 4GB RAM
- **Hardisk:**100GB

**Software Requirements:**

- **Operating system:** Windows 7 or later versions or any other os
- **Language:** PYTHON

# CONCEPTS USED

- **Class:** A Class is like an object constructor, or a "blueprint" for creating objects.
- **Python math module:** Python has a built-in module that you can use for mathematical tasks. The math module has a set of methods and constants. For example: **math.ceil()**: Rounds a number up to the nearest integer, **math.sqrt()**: Returns the square root of a number
- **Python string functions:** Python has a set of built-in methods that you can use on strings. For example: **isalnum()**:Returns True if all characters in the string are alphanumeric, **lower()**:Converts a string into lower case
- **Exception Handling:** When an error occurs, or exception as we call it, Python will normally stop and generate an error message. The **try block** lets you test a block of code for errors. **The except** block lets you handle the error

# **SAMPLE CODE**

```

import math
class NoInput(Exception):
    pass
class InvalidInput(Exception):
    pass
def fun(n):
    n=n.lower() # to down case all the letters
    st=""
    cnt=0
    r=0
    c=0
    #to remove punctuation
    for i in n:
        if i.isalnum():
            st += i
    for i in st:
        cnt=cnt+1 # count of the string

    print("The normalised code is: ",st)
    c=math.ceil(math.sqrt(cnt)) # to calculate no of columns
    r=math.ceil(cnt/c) # to calculate no of rows
    l=cnt
    k=0
    str=""
    s = [[0 for j in range(c) ] #to initialize all elements to zero

```

```

        for i in range(r)]
# string is copied to the matrix
for i in range(r):
    for j in range(c):
        if k >= l:
            s[i][j] = " "
            k += 1
        else:
            s[i][j] = st[k]
            k += 1

for i in range(c): #to convert the normalized text to encrypted code
    for j in range(r):
        if s[j][i] == " " :
            continue
        str+=s[j][i]
    str=str+" "
print("The encrypted code is: ",str)
if __name__=="__main__":
    try:
        n=input("Enter the code: ")
        if(n==""):
            raise NoInput
        if(len(n)<3):
            raise InvalidInput
        fun(n)
    except NoInput:
        print("Enter a valid English Text")
    except InvalidInput:

```

```
print("Enter minimum 3 length String")  
fun(n)
```

# SCREEN SHOTS



```
input
Enter the code: If man was meant to stay on the ground, god would have given us roots.
The normalised code is: ifmanwasmeanttostayonthebackgroundgodwouldhavegivenusroots
The encrypted code is: imtgdv$ fearwer mayoogo anouuio ntnnlvt wttddes aohghn sseoau

...Program finished with exit code 0
Press ENTER to exit console.
```

```
input
Enter the code: Have a nice day.
The normalised code is: haveaniceday
The encrypted code is: hae and via ecy

...Program finished with exit code 0
Press ENTER to exit console.
```

```
input
Enter the code: CHILL OUT!
The normalised code is: chillout
The encrypted code is: clu hlt io

...Program finished with exit code 0
Press ENTER to exit console.█
```

# **FUTURE ENHANCEMENTS**

A feature that may be added to the proposed selective scheme is the ‘selection criteria’. Encryption technique can be chosen dynamically as the content is being distributed and the selection criteria can be changed as needed by the application.

# CONCLUSION

More and more users nowadays understand the idea of Internet's openness and danger of web surfing, which explains the growing popularity of data encryption. With a lack of security mechanism any data transferred over, the Internet may be easily stolen and viewed by anyone.

But when people understand this concept, then the crimes like data or identity theft, data encryption becomes worth pursuing.

# REFERENCES

**The following are websites referred during the execution of project:**

<https://en.wikipedia.org/wiki/Encryption>

<https://www.geeksforgeeks.org/take-matrix-input-from-user-in-python/>

[https://www.onlinegdb.com/online\\_python\\_compiler](https://www.onlinegdb.com/online_python_compiler)

[https://www.w3schools.com/python/python\\_try\\_except.asp](https://www.w3schools.com/python/python_try_except.asp)