A Python Report

Project Title:-

Your task is to find if it is possible to cut the cake in the below-mentioned ways for a given value of N.

Given an integer N and a cake which can be cut into pieces, each cut should be a straight line going from the centre of the cake to its border. Also, the angle between any two cuts must be a positive integer. Two pieces are equal if their appropriate angles are equal.

The given cake can be cut in the following three ways:

- Cut the cake into N equal pieces.
- Cut the cakes into N pieces of any size.
- Cut the cake into N pieces such that no two of them are equal

BACHELOR OF TECHNOLOGY

Computer science and Engineering

Submitted to

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LOVELY PROFESSIONAL UNIVERSITY

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ACKNOWLEDGEMENT

No doubt this project is only possible because of my mentor and my Prof. Radhika Nambiar We would like to thank him from the depth of our hearts for giving us knowledge of Python and for also giving me so much advice and various more inputs in this project. And also We want to say thanks to my all friends and family who gave me so much wonderful feedback on this project.
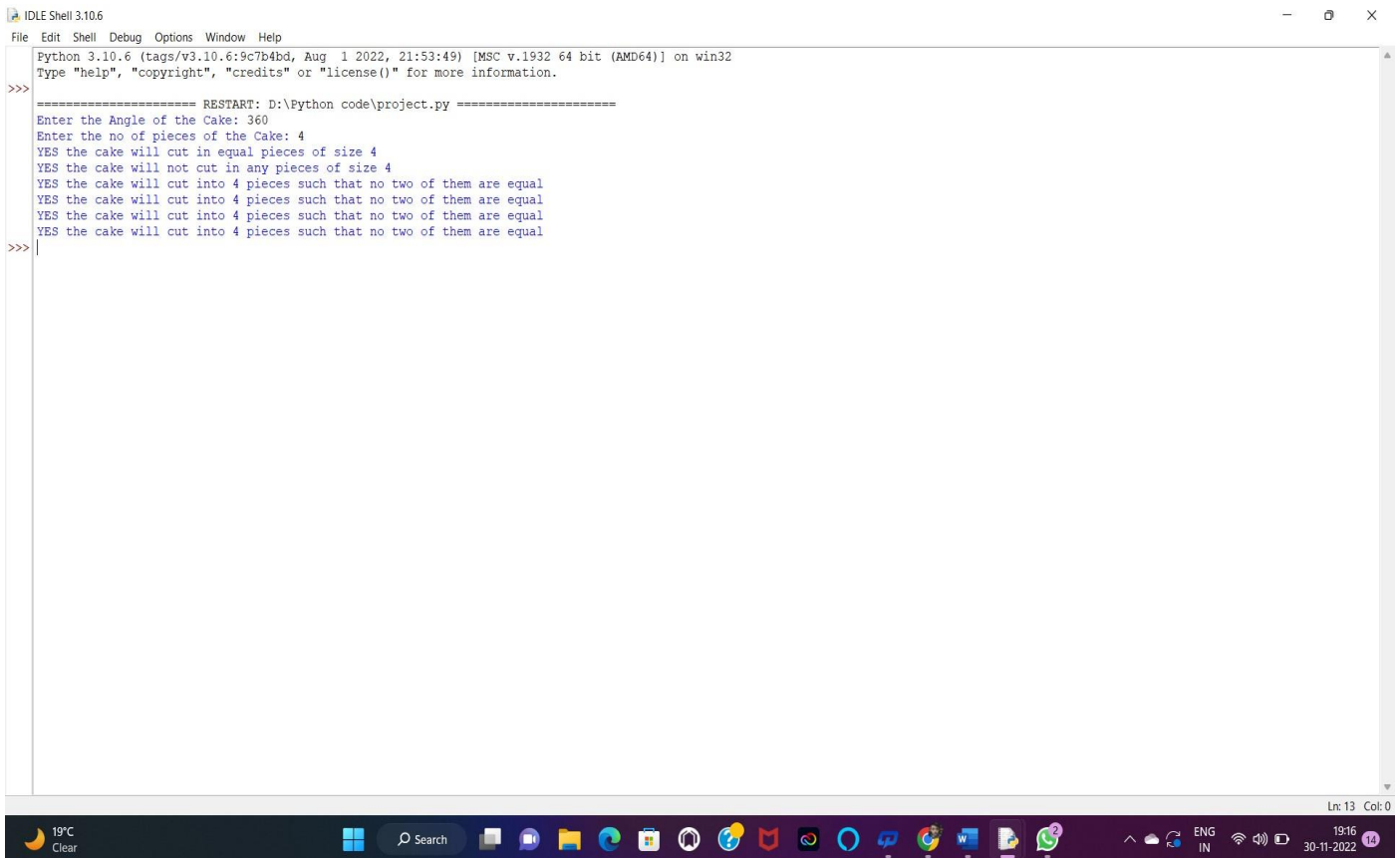
DESIGN AND SOURCE CODE:- SOURCE CODE:-

```
project.py - D:\Python code\project.py (3.10.6)                                              —    □    ×
File Edit Format Run Options Window Help
cakeangle=int(input("Enter the Angle of the Cake: "))
N=int(input("Enter the no of pieces of the Cake: "))
if(cakeangle%N==0):
    print("YES the cake will cut in equal pieces of size %d"%N)
else:
    print("NO the cake will not cut in equal pieces of size %d"%N)
if(N>cakeangle):#only when N is greater the cake angle cake can't be cut into pieces
    print("NO the cake will not cut in any pieces of size %d"%N)
else:
    print("YES the cake will not cut in any pieces of size %d"%N)
n=1 #start substracting the cake
for i in range(N):
    cakeangle=n
    n+=1
    if (cakeangle<0):
        print("NO the cake will not cut into %d pieces such that no two of them are equal"%N)
        break
    else:
        print("YES the cake will cut into %d pieces such that no two of them are equal"%N)
|
                                                                                          Ln: 20  Col: 0
```

cakeangle=int(input("Enter the Angle of the Cake: ")) N=int(input("Enter

the no of pieces of the Cake: ")) if(cakeangle%N==0):

   print("YES the cake will cut in equal pieces of size %d"%N) else:

   print("NO the cake will not cut in equal pieces of size %d"%N)

```
if(N>cakeangle):#only when N is greater the cake angle cake can't be cut into pieces

print("NO the cake will not cut in any pieces of size %d"%N) else:

    print("YES the cake will not cut in any pieces of size %d"%N)

n=1 #start substracting the cake  for i in range(N):

cakeangle=n    n+=1    if (cakeangle<0):

        print("NO the cake will not cut into %d pieces such that no two of them are equal"%N)

        break

else:

        print("YES the cake will cut into %d pieces such that no two of them are equal"%N)
```

Result page:-

```
IDLE Shell 3.10.6                                                                            —  □  ✕
File  Edit  Shell  Debug  Options  Window  Help
    Python 3.10.6 (tags/v3.10.6:9c7b4bd, Aug  1 2022, 21:53:49) [MSC v.1932 64 bit (AMD64)] on win32
    Type "help", "copyright", "credits" or "license()" for more information.
>>>
    ====================== RESTART: D:\Python code\project.py ======================
    Enter the Angle of the Cake: 360
    Enter the no of pieces of the Cake: 4
    YES the cake will cut in equal pieces of size 4
    YES the cake will not cut in any pieces of size 4
    YES the cake will cut into 4 pieces such that no two of them are equal
    YES the cake will cut into 4 pieces such that no two of them are equal
    YES the cake will cut into 4 pieces such that no two of them are equal
    YES the cake will cut into 4 pieces such that no two of them are equal
>>> |
                                                                                             Ln: 13  Col: 0
```

Conclusion

We hope and wish that this document will help you to understand our minimalist but attractive project as I had tried something different from usual. We used Python for logic.