Homework #5

01286121 Computer Programming

Software Engineering Program,

Department of Computer Engineering,

School of Engineering, KMITL

By

66011149 Phatthadon Sornplang

1.) Write a Python program to iterate the step 4-5 calculation with 5, 6, and 7 time respectively in order to compare the approximation results and report your answers in the three decimal points of accuracy.

```python
import math

n = int(input("Enter a number:"))

result = math.sqrt(n)

guess = n/2

for j in range(8):
    temp = n/guess
    guess = (guess  + temp)/2
    if j == 5 or j == 6 or j == 7:
        print("The approximate square root value of", n ,"when iterated", j ,"times is", format(guess, '.3f'))

print("The actual square root of", n , "is" ,format(result, '.3f'))
```

```
phatt@Macbook_Pro MINGW64 ~/OneDrive/Desktop/Code Files/Python/Computer Prgramming (Python)/5/HW
$ C:/Users/phatt/AppData/Local/Programs/Python/Python311/python.exe "c:/Users/phatt/OneDrive/Desktop
t.py"
Enter a number:9000
The approximate square root value of 9000 when iterated 5 times is 108.555
The approximate square root value of 9000 when iterated 6 times is 95.731
The approximate square root value of 9000 when iterated 7 times is 94.872
The actual square root of 9000 is 94.868
```

2.) Write a Python program using the turtle module and while loops to print out the calendar of 12 months of year 2023 in the following format.

:(

3.) Write a Python program that prompts the user to enter any integer, greater than or equal to 1, and the program displays the output with the pattern like the following examples:

```python
while True:
    print()
    inpus = input("Enter a number: ")

    if inpus == 'exit':
        break

    try:
        e = int(inpus)
    except ValueError:
        continue

    if e >= 1:
        n = 0
        for r in range(0, e):
            e -= 1
            for x in range(0, e+1):
                n = n + 1
                for a in range (0, n-1):
                    print('*', end='')
                print()
            for b in range(0, e + 1):
                n = n - 1
                if b == e:
                    print('*', end = '')
                else:
                    for d in range (0, n+1):
                        print('*', end='')
                print()
    else:
        continue
```

```
phatt@Macbook_Pro MINGW64 ~/OneDrive/Desktop/Code Files/Python/Computer Prgramming (Python)/5/HW
$ C:/Users/phatt/AppData/Local/Programs/Python/Python311/python.exe "c:/Users/phatt/OneDrive/Desktop/Code Fi
"

Input: 1

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Input: 3

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Input: 5

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```