

Course: Math 1332 Contemporary Mathematics
Semester: Fall 2021
Class: Lab Assignment: The Tower of Hanoi
Date: Sep 27, 2021

Objectives

Design a function to solve the Tower of Hanoi problem

First to all, we need to define a function to indicate the user what disk has to move from one peg to another.

Move a disk from a pg to another

```
[1]: # Function to indicate the movement from a disk to another
def move(f,t):
    print(f'Move disk from {f} to {t}')
```

Next, we need to define the Tower of Hanoi function

Tower of Hanoi Function

```
[2]: # Definign the Hanoi function that will be use recurrently
def hanoi(n,f,h,t):
    if n==0:
        pass
    else:
        hanoi(n-1,f,t,h)
        move(f,t)
        hanoi(n-1,h,f,t)
```

Exercise

Describe explicitly how to move four disks from peg A to peg C using peg B as auxiliary.

```
[3]: hanoi(4, 'A', 'B', 'C')
```

```
Move disk from A to B
Move disk from A to C
Move disk from B to C
Move disk from A to B
Move disk from C to A
Move disk from C to B
Move disk from A to B
Move disk from A to C
Move disk from B to C
Move disk from B to A
Move disk from C to A
Move disk from B to C
Move disk from A to B
Move disk from A to C
```

Move disk from B to C

[]: