#Replace all \_\_\_\_\_\_ with rjust, ljust or center.

thickness = int(input()) #This must be an odd number

c = 'H'

#Top Cone

for i in range(thickness):

    print((c\*i).rjust(thickness-1)+c+(c\*i).ljust(thickness-1))

#Top Pillars

for i in range(thickness+1):

    print((c\*thickness).center(thickness\*2)+(c\*thickness).center(thickness\*6))

#Middle Belt

for i in range((thickness+1)//2):

    print((c\*thickness\*5).center(thickness\*6))

#Bottom Pillars

for i in range(thickness+1):

    print((c\*thickness).center(thickness\*2)+(c\*thickness).center(thickness\*6))

#Bottom Cone

for i in range(thickness):

    print(((c\*(thickness-i-1)).rjust(thickness)+c+(c\*(thickness-i-1)).ljust(thickness)).rjust(thickness\*6))