1. Print the following patterns with a py script –

1.1-**pyramid pattern**

def pypart(n):

for i in range(0, n):

# inner loop to handle number of columns

# values changing acc. to outer loop

for j in range(0, i+1):

# printing stars

print("\* ",end="")

# ending line after each row

print("\r")

n = 5

pypart(n)

**1.2 Character pattern**

def contalpha(n):

# initializing value corresponding to 'A'

# ASCII value

num = 65

# outer loop to handle number of rows

- for i in range(0, n):

# inner loop to handle number of columns

# values changing acc. to outer loop

for j in range(0, i+1):

# explicitely converting to char

ch = chr(num)

# printing char value

print(ch, end=" ")

# incrementing at each column

num = num +1

# ending line after each row

print("\r")

n = 5

contalpha(n)

1. Problem Statement :

# This loop will go on until the budget is integer or float

while True:

try:

bg = float(input("Enter your budget : "))

# if budget is integer or float it will be stored

# temporarily in variable 's'

s = bg

except ValueError:

print("PRINT NUMBER AS A AMOUNT")

continue

else:

break

a ={"name":[], "quant":[], "price":[]}

b = list(a.values())

na = b[0]

qu = b[1]

pr = b[2]

# if correct then proceed else continue asking options

while True:

try:

ch = int(input("1.ADD\n2.EXIT\nEnter your choice : "))

except ValueError:

print("\nERROR: Choose only digits from the given option")

continue

else:

if ch == 1 and s>0:

pn = input("Enter product name : ")

q = input("Enter quantity : ")

p = float(input("Enter price of the product : "))

if p>s:

print("\nCAN, T BUT THE PRODUCT")

continue

else:

if pn in na:

# find the index of that product

ind = na.index(pn)

qu.remove(qu[ind])

pr.remove(pr[ind])

qu.insert(ind, q)

pr.insert(ind, p)

s = bg-sum(pr)

print("\namount left", s)

else:

na.append(pn)

qu.append(q)

s = bg-sum(pr)

print("\namount left", s)

elif s<= 0:

print("\nNO BUDGET")

else:

break

print("\nAmount left : Rs.", s)

if s in pr:

print("\nAmount left can buy you a", na[pr.index(s)])

print("\n\n\nGROCERY LIST")

# print final grocery list

for i in range(len(na)):

print(na[i], qu[i], pr[i])