1. Python Program for Cycle Sort.

In [2]:
```python
def cycle_Sort(array):
  write = 0

  for cycle in range(0, len(array) - 1):
    ele = array[cycle]

    position = cycle
    for i in range(cycle + 1, len(array)):
      if array[i] < ele:
        position += 1

    if position == cycle:
      continue

    while ele == array[position]:
      position += 1
    array[position], ele = ele, array[position]
    write += 1

    while position != cycle:

      position = cycle
      for a in range(cycle + 1, len(array)):
        if array[a] < ele:
          position += 1

      while ele == array[position]:
        position += 1
      array[position], ele = ele, array[position]
      write += 1

  return write

array = [2, 4, 5, 1, 3]
print("The original array is:", array)
n = len(array)
cycle_Sort(array)
print("The sorted array is: ",array)
```

```
The original array is: [2, 4, 5, 1, 3]
The sorted array is:  [1, 2, 3, 4, 5]
```

2. Python Program for Stooge Sort.

In [3]:
```python
def stoogesort(arr, l, h):
 if l >= h:
  return

 if arr[l]>arr[h]:
  t = arr[l]
  arr[l] = arr[h]
  arr[h] = t

 if h-l+1 > 2:
  t = (int)((h-l+1)/3)

  stoogesort(arr, l, (h-t))

  stoogesort(arr, l+t, (h))

  stoogesort(arr, l, (h-t))

arr = [2, 4, 5, 3, 1]
n = len(arr)

stoogesort(arr, 0, n-1)

for i in range(0, n):
 print(arr[i], end = ' ')
```

```
1 2 3 4 5
```

3. Python Program to print the pattern ‘G’.

In [6]:
```python
result_str="";
for row in range(0,7):
    for column in range(0,7):
        if ((column == 1 and row != 0 and row != 6) or ((row == 0 or row == 6) and \
            column > 1 and column < 5) or (row == 3 and column > 2 and column < 6) or \
            (column == 5 and row != 0 and row != 2 and row != 6)):
            result_str=result_str+"*"
        else:
            result_str=result_str+" "
    result_str=result_str+"\n"
print(result_str);
```

```
 ***
*   *
*
* ***
*   *
*   *
 ***
```

4. Python Program to print an Inverted Star Pattern.

In [7]:
```python
n=11

for i in range (n, 0, -1):
    print((n-i) * ' ' + i * '*')
```

```
***********
 **********
  *********
   ********
    *******
     ******
      *****
       ****
        ***
         **
          *
```

5.Python Program to print double sided stair-case pattern.

In [8]:
```python
def pattern(n):

    for i in range(1,n+1):

        k =i + 1 if(i % 2 != 0) else i

        for g in range(k,n):
            if g>=k:
                print(end="  ")

        for j in range(0,k):
            if j == k - 1:
                print(" * ")
            else:
                print(" * ", end = " ")

n = 10
pattern(n)
```

```
                *   *
                *   *
            *   *   *   *
            *   *   *   *
        *   *   *   *   *   *
        *   *   *   *   *   *
    *   *   *   *   *   *   *   *
    *   *   *   *   *   *   *   *
*   *   *   *   *   *   *   *   *   *
*   *   *   *   *   *   *   *   *   *
```

6. Python Program to print with your own font.

In [10]:
```python
name = "GOODS"

# To take input from User
# name = input("Enter your name: \n\n")

length = len(name)
l = ""

for x in range(0, length):
    c = name[x]
    c = c.upper()

    if (c == "A"):
        print("..######..\n..#....#..\n..######..", end = " ")
        print("\n..#....#..\n..#....#..\n\n")

    elif (c == "B"):
        print("..######..\n..#....#..\n..#####...", end = " ")
        print("\n..#....#..\n..######..\n\n")

    elif (c == "C"):
        print("..######..\n..#.......\n..#.......", end = " ")
        print("\n..#.......\n..######..\n\n")

    elif (c == "D"):
        print("..#####...\n..#....#..\n..#....#..", end = " ")
        print("\n..#....#..\n..#####...\n\n")

    elif (c == "E"):
        print("..######..\n..#.......\n..#####...", end = " ")
        print("\n..#.......\n..######..\n\n")

    elif (c == "F"):
        print("..######..\n..#.......\n..#####...", end = " ")
        print("\n..#.......\n..#.......\n\n")

    elif (c == "G"):
        print("..######..\n..#.......\n..#.####..", end = " ")
        print("\n..#....#..\n..#####...\n\n")

    elif (c == "H"):
        print("..#....#..\n..#....#..\n..######..", end = " ")
        print("\n..#....#..\n..#....#..\n\n")

    elif (c == "I"):
        print("..######..\n....##....\n....##....", end = " ")
        print("\n....##....\n..######..\n\n")

    elif (c == "J"):
        print("..######..\n....##....\n....##....", end = " ")
        print("\n..#.##....\n..####....\n\n")

    elif (c == "K"):
        print("..#...#...\n..#..#....\n..##......", end = " ")
        print("\n..#..#....\n..#...#...\n\n")

    elif (c == "L"):
        print("..#.......\n..#.......\n..#.......", end = " ")
        print("\n..#.......\n..######..\n\n")

    elif (c == "M"):
        print("..#....#..\n..##..##..\n..#.##.#..", end = " ")
        print("\n..#....#..\n..#....#..\n\n")

    elif (c == "N"):
        print("..#....#..\n..##...#..\n..#.#..#..", end = " ")
        print("\n..#..#.#..\n..#...##..\n\n")

    elif (c == "O"):
        print("..######..\n..#....#..\n..#....#..", end = " ")
        print("\n..#....#..\n..######..\n\n")

    elif (c == "P"):
        print("..######..\n..#....#..\n..######..", end = " ")
        print("\n..#.......\n..#.......\n\n")

    elif (c == "Q"):
        print("..######..\n..#....#..\n..#.#..#..", end = " ")
        print("\n..#..#.#..\n..######..\n\n")

    elif (c == "R"):
        print("..######..\n..#....#..\n..#.##...", end = " ")
        print("\n..#...#...\n..#....#..\n\n")

    elif (c == "S"):
        print("..######..\n..#.......\n..######..", end = " ")
        print("\n.......#..\n..######..\n\n")

    elif (c == "T"):
        print("..######..\n....##....\n....##....", end = " ")
        print("\n....##....\n....##....\n\n")

    elif (c == "U"):
        print("..#....#..\n..#....#..\n..#....#..", end = " ")
        print("\n..#....#..\n..######..\n\n")

    elif (c == "V"):
        print("..#....#..\n..#....#..\n..#....#..", end = " ")
        print("\n...#..#...\n....##....\n\n")

    elif (c == "W"):
        print("..#....#..\n..#....#..\n..#.##.#..", end = " ")
        print("\n..##..##..\n..#....#..\n\n")

    elif (c == "X"):
        print("..#....#..\n...#..#...\n....##....", end = " ")
        print("\n...#..#...\n..#....#..\n\n")

    elif (c == "Y"):
        print("..#....#..\n...#..#...\n....##....", end = " ")
        print("\n....##....\n....##....\n\n")

    elif (c == "Z"):
        print("..######..\n......#...\n.....#....", end = " ")
        print("\n....#.....\n..######..\n\n")

    elif (c == " "):
        print("..........\n..........\n..........", end = " ")
        print("\n..........\n\n")

    elif (c == "."):
        print("----..----\n\n")
```

```
..######..
..#.......
..#.####..
..#....#..
..#####...


..######..
..#....#..
..#....#..
..#....#..
..######..


..######..
..#....#..
..#....#..
..#....#..
..######..


..#####...
..#....#..
..#....#..
..#....#..
..#####...


..######..
..#.......
..######..
.......#..
..######..
```

7. Get Current Date and Time using Python.

In [11]:
```python
import datetime

current_time = datetime.datetime.now()

print("Time now at greenwich meridian is:", current_time)
```

```
Time now at greenwich meridian is: 2022-06-25 06:24:02.282114
```

8. Python | Find yesterday’s, today’s and tomorrow’s date.

In [12]:
```python
from datetime import datetime, timedelta

presentday = datetime.now() # or presentday = datetime.today()

yesterday = presentday - timedelta(1)

tomorrow = presentday + timedelta(1)

print("Yesterday = ", yesterday.strftime('%d-%m-%Y'))
print("Today = ", presentday.strftime('%d-%m-%Y'))
print("Tomorrow = ", tomorrow.strftime('%d-%m-%Y'))
```

```
Yesterday =  24-06-2022
Today =  25-06-2022
Tomorrow =  26-06-2022
```

9.Python program to convert time from 12 hour to 24 hour format.

In [13]:
```python
def convert24(str1):

    if str1[-2:] == "AM" and str1[:2] == "12":
        return "00" + str1[2:-2]

    elif str1[-2:] == "AM":
        return str1[:-2]

    elif str1[-2:] == "PM" and str1[:2] == "12":
        return str1[:-2]

    else:

        return str(int(str1[:2]) + 12) + str1[2:8]

print(convert24("08:05:45 PM"))
```

```
20:05:45
```

In [ ]: