In [3]:

```
st=" "
n=int(input())
a=(n*2)
for i in range (0,a):
    if i<n:
        st+="😀"
        print(st)
    elif (i>(n-1)):
        st=st[:-1]
        print(st)
```

```
10
 😀
 😀😀
 😀😀😀
 😀😀😀😀
 😀😀😀😀😀
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 😀😀😀😀😀
 😀😀😀😀
 😀😀😀
 😀😀
 😀
```

In [4]:

```
em =" "
for i in range (9):
    if i<5:
        em+="😁"
        print(i,em)
    elif i>4:
        em=em[:-1]
        print (i,em)
```

```
0  😁
1  😁😁
2  😁😁😁
3  😁😁😁😁
4  😁😁😁😁😁
5  😁😁😁😁
6  😁😁😁
7  😁😁
8  😁
```

In [7]:

```
import random as rd
for i in range (100):
    k=rd.randint(1,100)
    print(k,end="\t")
```

```
4 100 74 38 54 64 82 75 20 80 21 19 63 7 17 73 95 38 55 36 84 22 68 99 43 11 81 11 98 62 2
3 60 52 16 21 42 36 79 42 36 89 78 80 77 89 29 12 94 71 98 47 77 85 3 40 64 61 14 20 5 85
66 85 83 72 40 51 49 53 61 83 83 55 86 93 14 48 71 81 88 17 92 26 30 24 60 87 88 35 11 41
26 45 38 6 86 74 27 86 26
```

In [17]:

```
import random as harsha
for i in range(100):
    k=harsha.randint(0,100)
    print (k,end=",")
```

```
14,23,90,50,29,22,60,51,17,35,33,79,0,43,44,5,84,9,78,61,9,86,11,13,19,71,7,73,30,32,53,9
8,10,27,81,8,55,83,18,100,75,28,71,41,29,25,81,80,39,51,51,9,61,13,30,14,59,60,66,59,50,8
,74,7,43,34,82,95,55,14,55,43,56,13,46,5,83,20,20,1,22,51,74,78,4,53,61,59,92,38,84,78,71
,85,92,82,28,15,94,77,
```

FILES

- **it is collection of information**
- **METHODS**
  - **read()**
  - **write()**
  - **readline()**
  - **readlines()**
- **MODES**
  - **read ---->r**
  - **write ---->w**
  - **append ---->a**
- **STEPS**
  - **open a file --> open(filename,mode)**
  - **method declaration--> read(),write()**
  - **close the file--> filename.close()**

In [ ]:

```
f=open("file1.txt","r")
f1=f.read(input())
print(f1)
f.close()
# data we kept in file1 will be displayed in o/p
```

In [4]:

```
f=open("file1.txt","a")
data=input('enter your data: ')
f1=f.write(data+"\n")
f.close()
# i/p() given in this programm is added to data present in file1 (in the next line)
```

```
enter your data: ravi prakash
```

In [8]:

```
f=open("file1.txt","w")
data=input()
f.write(data)
f.close()
# previous data is cleared and new data will appear
```

```
vijay babu
```

In [4]:

```
f=open("file2.txt","w")
data=input()
f.write(data)
f.close()
# txt file is created with name of file2
```

```
mahesh babu
```

In [5]:

```
f=open("file3.txt","r")
f1=f.readline()
print(f1)
f.close()
# reads only first line of data in file3
#<file3>
#hardik pandya
#jasprit bumrah
#rohit sharma
```

```
hardik pandya
```

In [6]:

```
f=open("file3.txt","r")
f1=f.readlines()
print(f1)
f.close()
#reads all the lines of data in file3
```

```
['hardik pandya\n', 'jasprit bumrah\n', 'rohit sharma']
```

In [8]:

```
with open("file3.txt","r") as f:# (another method)
    f1=f.read()
    print(f1)
# displays the data in file3
```

```
hardik pandya
jasprit bumrah
rohit sharma
```

In [11]:

```
with open("file3.txt","a") as f:
    data=input()
    f1=f.write(data+"\n")
# i/p given here is added to previous data of file3 in next line
```

```
ishan kishan
```

In [12]:

```
with  open  ("file3.txt","w") as f:
    data=input ()
    f1=f.write(data)
# clears all the previous data
# i/p given here is only available
```

```
krunal pandya
```

In [14]:

```
with  open  ("file4.txt","x") as f:
    data=input ()
    f1=f.write(data)
# we can not use already used files
# new file is created automatically
```

```
mumbai indians
```

In [15]:

```
# map(functionname/data type name,variable)
l=input().split()
m=list(map(int,l))
print(l)# strings
print(m)# int
#sum() we can't do bcoz of strings
```

```
print(sum(m))
# the i/p given is initialli taken as strings
# we can not add strins
# and converted into the int
# and then added
```

```
1 2 3 4 5
['1', '2', '3', '4', '5']
[1, 2, 3, 4, 5]
15
```

In [16]:

```
f=open("file5.txt",'r')
h=f.readlines()
#print(h)
for i in h:
    #print (i)
    g1=i.split()
    #print(g1)
    w=g1[0]
    #print(w)
    t=sum(list(map(int,g1[1:])))
    print(w,t)
```

```
abc 150
def 180
ghi 60
```

FIND THE FOLLOWING IN THE FILE

- **no of lines**
- **no of words**
- **no of letters**

In [18]:

```
# TO FIND NO OF LINES IN THE FILE
f=open("file6.txt","r")
f1 = f.readlines()
f2=len(f1)
print(f2)
```

```
3
```

In [19]:

```
#TO FIND NO OF WORDS IN THE FILE
f=open("file6.txt","r")
f1=f.read()
h=f1.split()
print(len(h))
```

```
5
```

In [1]:

```
# TO FIND NO OF LETTERS
f=open("file6.txt","r")
f1=f.read()
f2=len(f1)
print(f2)
```

```
34
```

- **text files & ipynb files should be in same folder otherwise programme can not read**