```
All PATTERNS
1.
rows=5
for i in range(1,rows+1):
  for j in range(1,i+1):
    print(j,end="")
  print()
output:
1
12
123
1234
12345
2.
rows=5
for i in range(rows,0,-1):
  # print(" "*(rows-i),end="")
  for j in range(1,i+1):
    print(j,end="")
  print()
output:
12345
1234
123
12
1
```

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3.
rows=5
for i in range(1,rows+1):
  print(" "*(rows-i),end="")
  for j in range(1,i+1):
    print(j,end="")
  print()
output:
   1
  12
 123
1234
12345
4.
rows=5
for i in range(rows,0,-1):
  print(" "*(rows-i),end="")
  for j in range(1,i+1):
    print(j,end="")
  print()
output:
12345
 1234
  123
```

```
12
    1
5.
rows=5
for i in range(1,rows+1):
  n=65
  m=97
  for j in range(1,i+1):
    if i==2 or i==4:
      print(chr(m),end="")
    else:
      print(chr(n),end="")
    n+=1
    m+=1
  print()
output:
Α
ab
ABC
abcd
ABCDE
6.
rows=5
for i in range(1,rows+1):
  n=65
  for j in range(1,i+1):
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```
if i==2 or i==4:
      print(j,end="")
    else:
      print(chr(n),end="")
    n+=1
  print()
output:
Α
12
ABC
1234
ABCDE
7.
rows=5
for i in range(1,rows+1):
  n=65
  for j in range(1,i+1):
    print(chr(n),end="")
    n+=1
  print()
output:
Α
ΑB
ABC
```

```
ABCD
ABCDE
8.
rows=5
for i in range(1,rows+1):
  for j in range(1,i+1):
    print(i,end="")
  print()
output:
1
22
333
4444
55555
9.
rows=5
for i in range(1,rows+1):
  for j in range(1,i+1):
    print("*",end="")
  print()
output:
```

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10.
rows=int(input("enter rows :"))
for i in range(1,rows+1):
  print(" "*(rows-i),end="")
  for j in range(2*i-1):
    print("*",end="")
  print()
for i in range(rows,0,-1):
  print(" "*(rows-i),end="")
  for j in range(2*i-1):
    print("*",end="")
  print()
output:
   ***
  ****
 *****
*****
*****
 *****
  ****
   ***
```

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11.
rows=5
n=65
for i in range(1,rows+1):
  for j in range(1,i+1):
    print(chr(n),end="")
    n+=1
  print()
output:
Α
BC
DEF
GHIJ
KLMNO
12.
rows=5
for i in range(1,rows+1):
  n=65
  for j in range(1,i+1):
    if i==2 or i==4:
      print(chr(n),end="")
    else:
      print(j,end="")
    n+=1
  print()
```

```
output:
1
ΑB
123
ABCD
12345
13.
rows=5
for i in range(1,rows+1):
  n=97
  for j in range(1,i+1):
    if i==2 or i==4:
      print(chr(n),end="")
    else:
      print(j,end="")
    n+=1
  print()
Output:
1
ab
123
abcd
12345
14.
rows=8
for i in range(1,rows+1):
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for j in range(1,i+1):
   print("*",end="")
  print()
rows=7
for i in range(rows,0,-1):
  for j in range(1,i+1):
    print("*",end="")
  print()
output:
****
*****
*****
*****
*****
*****
****
****
```

```
15.
rows=8
for i in range(1,rows+1):
  print(" "*(rows-i),end="")
  for j in range(1,i+1):
   print("*",end="")
  print()
rows=7
for i in range(rows,0,-1):
  print(" "*(rows-i),end="")
  for j in range(1,i+1):
    print("*",end="")
  print()
output:
****
 ***
  ***
   **
```

```
16.
rows=4
for i in range(1,rows+1):
  if i==1 or i==2 or i==3:
    for j in range(2):
       print("*",end="")
    print(" "*2,end="")
    for j in range(2):
      print("*",end="")
  if i==4:
    print("*"*6,end="")
  print()
output:
*****
17.
rows=5
for i in range(rows,0,-1):
  for j in range(1,i+1):
    print(i,end="")
  print()
```

