```python
>>> def lex(n):
    r=2**n
    line="+---"*n+"+"
    for i in range(r):
        a="|"
        print(line)
        for j in range(n):
            if(i//(r/2**(j+1)))%2==0:
                a=a+" T |"
                continue
            a=a+" F |"
        print(a)
```

```
>>> lex(3)
+---+---+---+
| T | T | T |
+---+---+---+
| T | T | F |
+---+---+---+
| T | F | T |
+---+---+---+
| T | F | F |
+---+---+---+
| F | T | T |
+---+---+---+
| F | T | F |
+---+---+---+
| F | F | T |
+---+---+---+
| F | F | F |
```

| | repeat # | | | # | | | # | |
|---|---|---|---|---|---|---|---|---|
| Row | | | | Column | | | | |
| | 0 | | | 1 | | | 2 | |
| 0 | 0 | TRUE | 0 | TRUE | | 0 | TRUE | |
| 1 | 0 | TRUE | 0 | TRUE | | 1 | FALSE | |
| 2 | 0 | TRUE | 1 | FALSE | | 2 | TRUE | |
| 3 | 0 | TRUE | 1 | FALSE | | 3 | FALSE | |
| 4 | 1 | FALSE | 2 | TRUE | | 4 | TRUE | |
| 5 | 1 | FALSE | 2 | TRUE | | 5 | FALSE | |
| 6 | 1 | FALSE | 3 | FALSE | | 6 | TRUE | |
| 7 | 1 | FALSE | 3 | FALSE | | 7 | FALSE | |
| Repeat | | | | | | | | |
| Factor | | 4 | | 2 | | | 1 | |

Notice the truth table at left. The rows are numbered 0 to 7 and the columns are numbered 0 to 2. So the first entry in the upper left is in the 0 row 0 column. Also notice that in the various columns the same entry repeats in an obvious pattern. The number of times an entry repeats before it changes is the repeat factor. The number of times it has changed in that column is the repeat number. The repeat factor for the column is at the bottom of the column and the repeat number is to the left of the column. Notice that the Truth value is true if the repeat number is even and false if it is odd. In the program I is the row and j is the column. N is the number of statements and r is the number of rows. Line draws the +---+---+ between rows.

2**(J+1) is 2 for column zero, 4 for column 1,8 for column 2 and so forth.  r/2**(j+1) calculates the repeat factor for the jth column. i//( r/2**(j+1)) calculates the repeat number the ith row j[th] column cell or entry.  (i//( r/2**(j+1)))%2 is a modulus operations it divides the repeat number by two and keeps the remainder.  It is zero if the repeat number is even (2 divides evenly into an even number) and one if the number is odd. (an odd number will have a remainder of one when divided by two.  A is a variable the collects the character string for each row.  At the end of the j for loop it is full of the values for the i row.  The program prints i row then the I for loop increments I by one and starts the next row.   See the table below to see how the values change with I and j to calculate repeat factor, repeat number, and check to see if the repeat number is even or odd.

| i | J | n=3 | r=n**3=8 | | | 8 | integer division | Mod 2 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | j+1 | 2**(j+1) | r/(2**(j+1)) | i/(r/(2**(j+1))) | i//(r/(2**(j+1))) | i//(r/(2**(j+1)))%2 | Row | Column | Value | Table Entry | | |
| 0 | 0 | 1 | 2 | 4 | 0 | 0 | 0 | 0 | 0 | TRUE | TRUE | | |
| 0 | 1 | 2 | 4 | 2 | 0 | 0 | 0 | 0 | 1 | TRUE | TRUE | TRUE | |
| 0 | 2 | 3 | 8 | 1 | 0 | 0 | 0 | 0 | 2 | TRUE | TRUE | TRUE | TRUE |
| 1 | 0 | 1 | 2 | 4 | 0.25 | 0 | 0 | 1 | 0 | TRUE | TRUE | | |
| 1 | 1 | 2 | 4 | 2 | 0.5 | 0 | 0 | 1 | 1 | TRUE | TRUE | TRUE | |
| 1 | 2 | 3 | 8 | 1 | 1 | 1 | 1 | 1 | 2 | FALSE | TRUE | TRUE | FALSE |
| 2 | 0 | 1 | 2 | 4 | 0.5 | 0 | 0 | 2 | 0 | TRUE | TRUE | | |
| 2 | 1 | 2 | 4 | 2 | 1 | 1 | 1 | 2 | 1 | FALSE | TRUE | FALSE | |
| 2 | 2 | 3 | 8 | 1 | 2 | 2 | 0 | 2 | 2 | TRUE | TRUE | FALSE | TRUE |
| 3 | 0 | 1 | 2 | 4 | 0.75 | 0 | 0 | 3 | 0 | TRUE | TRUE | | |
| 3 | 1 | 2 | 4 | 2 | 1.5 | 1 | 1 | 3 | 1 | FALSE | TRUE | FALSE | |
| 3 | 2 | 3 | 8 | 1 | 3 | 3 | 1 | 3 | 2 | FALSE | TRUE | FALSE | FALSE |
| 4 | 0 | 1 | 2 | 4 | 1 | 1 | 1 | 4 | 0 | FALSE | FALSE | | |
| 4 | 1 | 2 | 4 | 2 | 2 | 2 | 0 | 4 | 1 | TRUE | FALSE | TRUE | |
| 4 | 2 | 3 | 8 | 1 | 4 | 4 | 0 | 4 | 2 | TRUE | FALSE | TRUE | TRUE |