

chetan_projects > C_experiments > exp6 > C 1_fact_bino.c > ...

```
1  #include <stdio.h>
2
3  int fact_rec(int n) {
4      if (n == 0) return 1;
5      return n * fact_rec(n - 1);
6  }
7
8  int fact_non_rec(int n) {
9      int f = 1, i;
10     for (i = 1; i <= n; i++) {
11         f = f * i;
12     }
13     return f;
14 }
15
16 int binomial(int n, int r) {
17     return fact_non_rec(n) / (fact_non_rec(r) * fact_non_rec(n - r));
18 }
19
20 int main() {
21     int i, j;
22
23     printf("Recursive: 5! = %d\n", fact_rec(5));
24     printf("Non-Recursive: 5! = %d\n\n", fact_non_rec(5));
25
26     printf("n\t r\t C(n,r)\n");
27     for (i = 5; i <= 7; i++) {
28         for (j = 0; j <= i; j++) {
29             printf("%d\t%d\t%d\n", i, j, binomial(i, j));
30         }
31     }
32
33     return 0;
34 }
35
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS D:\chetan_projects> & 'c:\Users\DELL\.vscode\extensions\ms-vscode  
-In-sgr4l2cy.asx' '--stdout=Microsoft-MIEngine-Out-lmiibe52.ws5' '--s  
=C:\msys64\ucrt64\bin\gdb.exe' '--interpreter=mi'
```

Recursive: 5! = 120

Non-Recursive: 5! = 120

n	r	C(n,r)
5	0	1
5	1	5
5	2	10
5	3	10
5	4	5
5	5	1
6	0	1
6	1	6
6	2	15
6	3	20
6	4	15
6	5	6
6	6	1
7	0	1
7	1	7
7	2	21
7	3	35
7	4	35
7	5	21
7	6	7
7	7	1

PS D:\chetan_projects>