

```
1: #include <stdio.h>  
2: #include <stdlib.h>  
3: #include <math.h>  
4: //Constructed By Dominic Alexander Cooper  
5: int main(){  
6:  
7:  
8:     char a[101] = {'a','b','c','d','e','f','g','h','i','j','k','l','m','n','o','p','q',  
    'r','s','t','u','v','w','x','y','z',' ','\n','\t',' ', '\'', '\"', '.', '/', '<', '>', '?',  
    ':', ';', '@', '#', '~', ']', '[', '{', '}', '`', '-', '|', '_', '!', '"', '$', '%', '^', '&', '*',  
    '(', ')', '-', '+', '=', 'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H', 'I', 'J', 'K', 'L', 'M', 'N', 'O',  
    'P', 'Q', 'R', 'S', 'T', 'U', 'V', 'W', 'X', 'Y', 'Z', '\0', '1', '2', '3', '4', '5', '6', '7', '8', '9',  
    '\0'};  
9:     FILE *p; p = fopen("SOLUTION1.txt","w");  
10:    int k = 100;  
11:    printf("\n\tk = 100");  
12:    int noc; printf("\n\tn = ");  
13:    scanf("%d", &noc);  
14:    printf("\n\tNumber Of FILE Cells = %d", noc);  
15:    int n = noc;  
16:    int row, col;  
17:    int cell;  
18:    int rdiv;  
19:    unsigned long long id;  
20:    id = 0;  
21:    int nbr_comb = pow(k+1, n);  
22:    for (row=0; row < nbr_comb; row++){  
23:        id++; fprintf(p,"\\n\\n\\n\\nFILE%d\\n\\n\\n\\n", id);  
24:        for (col=n-1; col>=0; col--){ rdiv = pow(k+1, col);  
25:            cell = (row/rdiv) % (k+1); fprintf(p,"%c", a[cell]);  
26:        }  
27:        printf("\\n");  
28:    }  
29:    fprintf(p,"\\n\\n\\t(k+1)^n = (%d + 1)^%d = %d", k, n, id);  
30:    fclose(p);  
31:  
32:    return 0;  
33: }
```