#include <stdio.h>

#include <string.h>

//Storing the Keypad digits

const char keypad[10][5] = {" ", "", "abc", "def", "ghi", "jkl",

"mno", "pqrs", "tuv", "wxyz"};

void printWordsUtil(int number[], int curr\_digit, char output[], int n);

//Main program

int main(void)

{

int number[] = {2, 3, 4};

int n = sizeof(number)/sizeof(number[0]);

char result[n+1];

result[n] ='\0';

printWordsUtil(number, 0, result, n);

return 0;

}

// A recursive function to print all possible words that can be obtained

void printWordsUtil(int number[], int curr\_digit, char output[], int n)

{

// Base case, if current output word is prepared

int i;

if (curr\_digit == n)

{

printf("%s ", output);

return ;

}

// Try all 3 possible characters for current digir in number[]

// and recur for remaining digits

for (i=0; i<strlen(keypad[number[curr\_digit]]); i++)

{

output[curr\_digit] = keypad[number[curr\_digit]][i];

printWordsUtil(number, curr\_digit+1, output, n);

if (number[curr\_digit] == 0 || number[curr\_digit] == 1)

return;

}

}