

```

public class keypad {
    public static String getOptions(int digit) {
        if (digit == 2) {
            return "abc";
        }
        if (digit == 3) {
            return "def";
        }
        if (digit == 4) {
            return "ghi";
        }
        if (digit == 7) {
            return "pqrs";
        }
        return "";
    }
}

```

```

public static String[] KeypadCombinations(int input) {
    if(input == 0)
    {
        String[] output = new String[1];
        output[0] = "";
        return output;
    }
    String smallOutput = KeypadCombinations(input/10);
    int lastDigit = input%10;
    String lastDigitOptions = getOptions(lastDigit);
    String[] output = new String [smallOutput.length * lastDigitOptions.length()];

    int k=0;
    for(int i=0; i<smallOutput.length;i++){
        for(int j=0; j<lastDigitOptions.length();j++)
        {
            output[k] = smallOutput[i] + lastDigitOptions.charAt(j);
            k++;
        }
    }
    return output;
}

```

```

public static void main(String[] args) {
    Scanner s = new Scanner(System.in);
    System.out.println("Enter Number");
    int input = s.nextInt();
    String[] output = KeypadCombinations(input);
    for(String outputString: output){

```

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        System.out.println(outputString);  
    }  
}  
}
```