DAY 47

INTERVIEW BIT PROBLEMS :

1. Colorful Number

For Given Number N find if its COLORFUL number or not
Return 0/1

COLORFUL number:
A number can be broken into different contiguous sub-sequence parts.
Suppose, a number 3245 can be broken into parts like 3 2 4 5 32 24 45 324 245.
And this number is a COLORFUL number, since product of every digit of a contiguous sub-sequence is different

Example:

N = 23
2 3 23
2 -> 2
3 -> 3
23 -> 6

this number is a COLORFUL number since product of every digit of a sub-sequence are different.

Output : 1

CODE :

PYTHON

```
class Solution:
    # @param A : integer
    # @return an integer
    def colorful(self, A):
        str_A=str(A)
        n=len(str_A)
        l=[]
        p=0
        for i in range(n):
            p=1
            for j in range(i,n):
                p*=int(str_A[j])
                if p in l:
                    return 0
                else:
                    l.append(p)
        return 1
```

C++

```
int Solution::colorful(int A) {
	string num = to_string(A);
	unordered_map<long long, bool>hash;
	for(int i=0;i<num.length();i++) {
		long long mul = 1;
		for(int j=i;j<num.length();j++){
			mul*=(num[j]-'0');
			if(hash.find(mul)!=hash.end())
				return 0;
			hash[mul]=true;
		}
	}
	return 1;
}
```