프로그래밍 실습 1

```
from __future__ import print_function
from sys import stdin

def printf(str, *args):
        print(str % args, end='')

max11 = 3
max21 = 3

t1=[]
t2=[]
t1t2=[]
t2t1=[]

printf("₩n 문자열 T1에 대해서 3개의 문자열을 입력하세요.₩n")
for i in range(0, max11):
        t1.append(stdin.readline().strip('₩n'))

printf("₩n 문자열 T2에 대해서 3개의 문자열을 입력하세요.₩n")
for i in range(0, max21):
        t2.append(stdin.readline().strip('₩n'))

printf("₩n concatenation of T1 & T2₩n")

for j in range(0, max21):
        for i in range(0, max11):
                t1t2.append(t1[i] + t2[j])

for i in range(0, max11*max21):
        printf("%s₩n" % t1t2[i])

printf("₩n concatenation of T2 & T1₩n")

for j in range(0, max11):
        for i in range(0, max21):
                t2t1.append(t2[i] + t1[j])

for i in range(0, max11*max21):
        printf("%s₩n" % t2t1[i])

stdin.readline()
```

프로그래밍 실습 2

```
from __future__ import print_function
from sys import stdin
import random
from time import clock

def printf(str, *args):
        print(str % args, end='')

t1= ["" for i in range(5)]
t2= []
t1t2=[]
t2t1=[]

fp1=open("T1data.txt", 'w')
fp2=open("pointer_result.txt", 'w');
fp3=open("notpoint_result.txt", 'w');

printf("₩ncreated a T1 : SAVE T1data.txt₩n")
for i in range(0, 5):
        for j in range(0, 20000):
                temp=chr(random.randrange(0, 26)%26+65)
                fp1.write(temp)
                t1[i] = t1[i] + temp
        fp1.write("₩n")

printf("₩nImage of T2₩n")
for i in range(0, 3):
        t2.append(stdin.readline().strip("₩n"))

printf("₩nImage of T2₩n")
for i in range(0, 3):
        printf("<%s>₩n" % t2[i])
printf("₩n POINTER T1 & T2")

printf("₩n    SAVE pointer_result.txt₩n")
start = clock()
for g in range(0, 100):
        for j in range(0, 3):
                for i in range(0, 5):
                        t1t2.append(t1[i] + t2[j])
end = clock()

for i in range(0, 15):
        fp2.write("%s₩n" % t1t2[i])
printf("Execution time : %.3f(ms)₩n", (end-start)*1000.0)

printf("₩n NOT POINTER T1 & T2")
printf("₩n    SAVE notpointer_result.txt₩n")
start = clock()
```

```
for g in range(0, 100):
	for j in range(0, 3):
		for i in range(0, 5):
			for l in range(0, 20001):
				try:
					if t1[i][l] == "₩000":
						break;
				except IndexError:
					break;
			t1t2.append(t1[i] + t2[j])
end = clock()

for i in range(0, 15):
	fp3.write("%s₩n" % t1t2[i])
printf("Execution time : %.3f(ms)₩n", (end-start)*1000.0)

fp1.close()
fp2.close()
fp3.close()

stdin.readline()
```

프로그래밍 실습 3

```
from __future__ import print_function
from sys import stdin

def printf(str, *args):
        print(str % args, end='')

class State:
        def __init__(self):
                self.m = 0
                self.c = 0
                self.p = ''

        def state_init(self):
                self.m = 2
                self.c = 2
                self.p = 'r'

        def state_moving(self, m, c):
                if self.p == 'r':
                        if self.m == 2 and self.c == 2:
                                if m == 0 and c == 1:
                                        self.m = 2
                                        self.c = 1
                                        self.p = 'l'
                                elif m == 0 and c == 2:
                                        self.m = 2
                                        self.c = 0
                                        self.p = 'l'
                                elif m == 1 and c == 0:
                                        printf("Never across the river!!")
                                        return -1
                        elif m == 1 and c == 1:
                                        self.m = 1
                                        self.c = 1
                                        self.p = 'l'
                                elif m == 2 and c == 0:
                                        self.m = 0
                                        self.c = 2
                                        self.p = 'l'
                        elif self.m == 2 and self.c == 1:
                                if m == 0 and c == 1:
                                        self.m = 2
                                        self.c = 0
                                        self.p = 'l'
                                elif m == 0 and c == 2:
                                        printf("Never across the river!!")
                                        return -1
                                elif m == 1 and c == 0:
                                        self.m = 1
                                        self.c = 1
                                        self.p = 'l'
                                elif m == 1 and c == 1:
                                        self.m = 1
                                        self.c = 0
                                        self.p = 'l'
                                elif m == 2 and c == 0:
```

```
                    self.m = 0
                    self.c = 1
                    self.p = 'l'
elif self.m == 2 and self.c == 0:
        if m == 0 and c == 1:
                    printf("Never across the river!!")
                    return -1
        elif m == 0 and c == 2:
                    printf("Never across the river!!")
                    return -1
        elif m == 1 and c == 0:
                    self.m = 1
                    self.c = 0
                    self.p = 'l'
        elif m == 1 and c == 1:
                    printf("Never across the river!!")
                    return -1
        elif m == 2 and c == 0:
                    self.m = 0
                    self.c = 0
                    self.p = 'l'
                    printf("!!!!ACCEPT!!!!₩n")
                    return 1
elif self.m == 1 and self.c == 1:
        if m == 0 and c == 1:
                    self.m = 1
                    self.c = 0
                    self.p = 'l'
        elif m == 0 and c == 2:
                    printf("Never across the river!!")
                    return –1
        elif m == 1 and c == 0:
                    self.m = 0
                    self.c = 1
                    self.p = 'l'
        elif m == 1 and c == 1:
                    self.m = 0
                    self.c = 0
                    self.p = 'l'
                    printf("!!!!ACCEPT!!!!₩n")
                    return 1
        elif m == 2 and c == 0:
                    printf("Never across the river!!")
                    return -1
elif self.m == 0 and self.c == 2:
        if m == 0 and c == 1:
                    self.m = 0
                    self.c = 1
                    self.p = 'l'
        elif m == 0 and c == 2:
                    self.m = 0
                    self.c = 0
                    self.p = 'l'
                    printf("!!!!ACCEPT!!!!₩n")
                    return 1
        elif m == 1 and c == 0:
                    printf("Never across the river!!")
                    return -1
```

```
        elif m == 1 and c == 1:
                printf("Never across the river!!")
                return -1
        elif m == 2 and c == 0:
                printf("Never across the river!!")
                return -1
elif self.m == 0 and self.c == 1:
        if m == 0 and c == 1:
                self.m = 0
                self.c = 0
                self.p = 'l'
                printf("!!!!ACCEPT!!!!₩n")
                return 1
        elif m == 0 and c == 2:
                printf("Never across the river!!")
                return -1
        elif m == 1 and c == 0:
                printf("Never across the river!!")
                return -1
        elif m == 1 and c == 1:
                printf("Never across the river!!")
                return -1
        elif m == 2 and c == 0:
                printf("Never across the river!!")
                return -1
elif self.p == 'l':
if self.m == 2 and self.c == 1:
        if m == 0 and c == 1:
                self.m = 2
                self.c = 2
                self.p = 'r'
elif m == 0 and c == 2:
                printf("Never across the river!!")
                return -1
        elif m == 1 and c == 0:
                printf("Never across the river!!")
                return -1
        elif m == 1 and c == 1:
                printf("Never across the river!!")
                return -1
        elif m == 2 and c == 0:
                printf("Never across the river!!")
                return -1
elif self.m == 2 and self.c == 0:
        if m == 0 and c == 1:
                self.m = 2
                self.c = 1
                self.p = 'r'
        elif m == 0 and c == 2:
                self.m = 2
                self.c = 2
                self.p = 'r'
        elif m == 1 and c == 0:
                printf("Never across the river!!")
                return -1
        elif m == 1 and c == 1:
                printf("Never across the river!!")
                return -1
```

```
        elif m == 2 and c == 0:
                printf("Never across the river!!")
                return -1
elif self.m == 1 and self.c == 1:
        if m == 0 and c == 1:
                printf("Never across the river!!")
                return -1
        elif m == 0 and c == 2:
                printf("Never across the river!!")
                return -1
        elif m == 1 and c == 0:
                self.m = 2
                self.c = 1
                self.p = 'r'
        elif m == 1 and c == 1:
                self.m = 2
                self.c = 2
                self.p = 'r'
        elif m == 2 and c == 0:
                printf("Never across the river!!")
                return -1
elif self.m == 0 and self.c == 2:
        if m == 0 and c == 1:
                printf("Never across the river!!")
                return -1
        elif m == 0 and c == 2:
                self.m = 2
                self.c = 2
                self.p = 'r'
        elif m == 1 and c == 0:
                printf("Never across the river!!")
                return –1
        elif m == 1 and c == 1:
                printf("Never across the river!!")
                return -1
        elif m == 2 and c == 0:
                self.m = 2
                self.c = 2
                self.p = 'r'
elif self.m == 0 and self.c == 1:
        if m == 0 and c == 1:
                self.m = 0
                self.c = 2
                self.p = 'r'
        elif m == 0 and c == 2:
                printf("Never across the river!!")
                return -1
        elif m == 1 and c == 0:
                self.m = 1
                self.c = 1
                self.p = 'r'
        elif m == 1 and c == 1:
                printf("Never across the river!!")
                return -1
        elif m == 2 and c == 0:
                self.m = 1
                self.c = 1
                self.p = 'r'
```

```
                elif self.m == 0 and self.c == 0:
                        if m == 0 and c == 1:
                                self.m = 0
                                self.c = 1
                                self.p = 'r'
                        elif m == 0 and c == 2:
                                self.m = 0
                                self.c = 2
                                self.p = 'r'
                        elif m == 1 and c == 0:
                                self.m = 1
                                self.c = 0
                                self.p = 'r'
                        elif m == 1 and c == 1:
                                self.m = 1
                                self.c = 1
                                self.p = 'r'
                        elif m == 2 and c == 0:
                                self.m = 2
                                self.c = 0
                                self.p = 'r'
        return 0

res = 0
s = State()

s.state_init()

list = []
while res == 0:
        printf("state : (%d,%d,%c)₩n" %(s.m, s.c, s.p) )
        while len(list) < 2:
                list += stdin.readline().strip('₩n').split()
        input_m = int(list.pop(0))
        input_c = int(list.pop(0))
        printf("Input : (%d,%d)₩n" %(input_m, input_c) )
        res = s.state_moving(input_m, input_c)
printf("₩n₩nstate : (%d,%d,%c)₩n" %(s.m, s.c, s.p) )

stdin.readline()
```