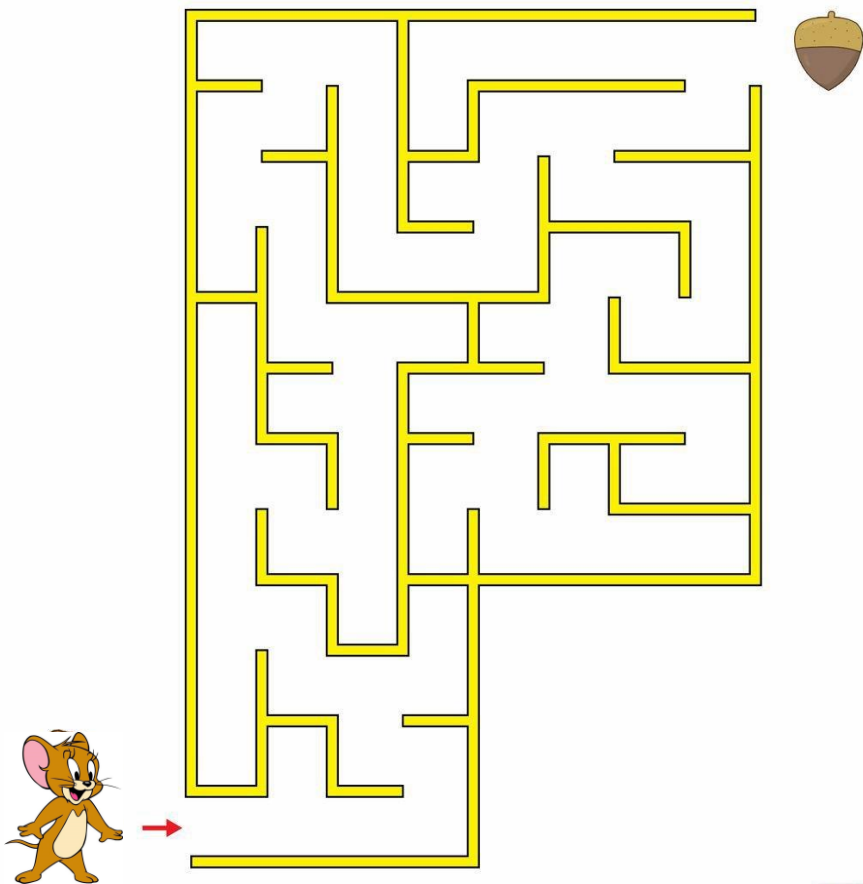


C/C++程序设计案例实战

——小老鼠走迷宫1

华中农业大学信息学院 翟瑞芳

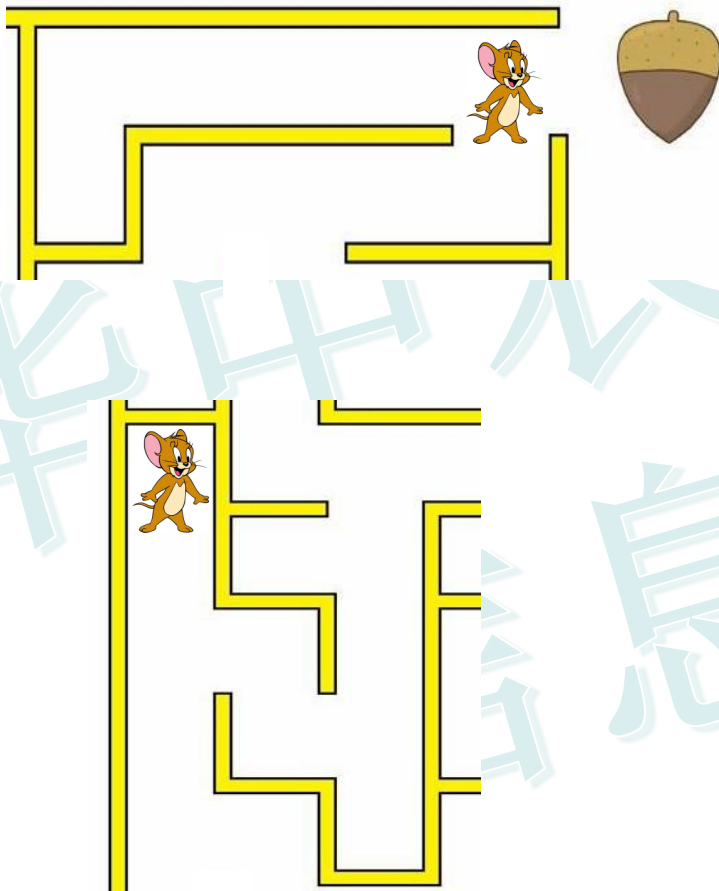
小老鼠走迷宫



分支结构：

- 单分支结构
- 两路分支 **if-else**结构
- 多分支结构

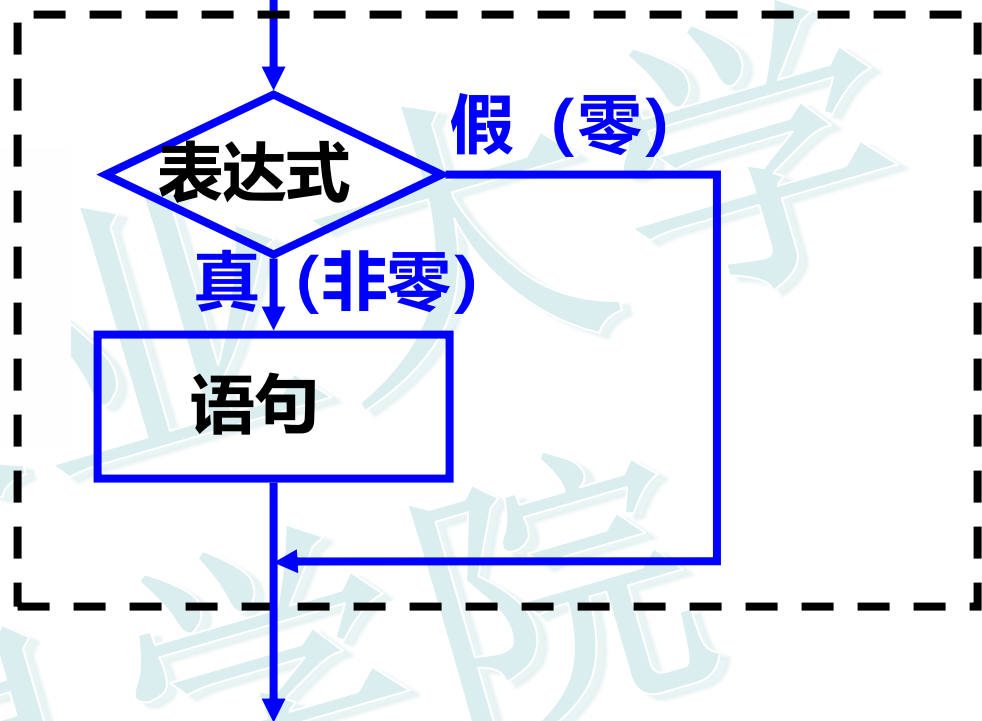
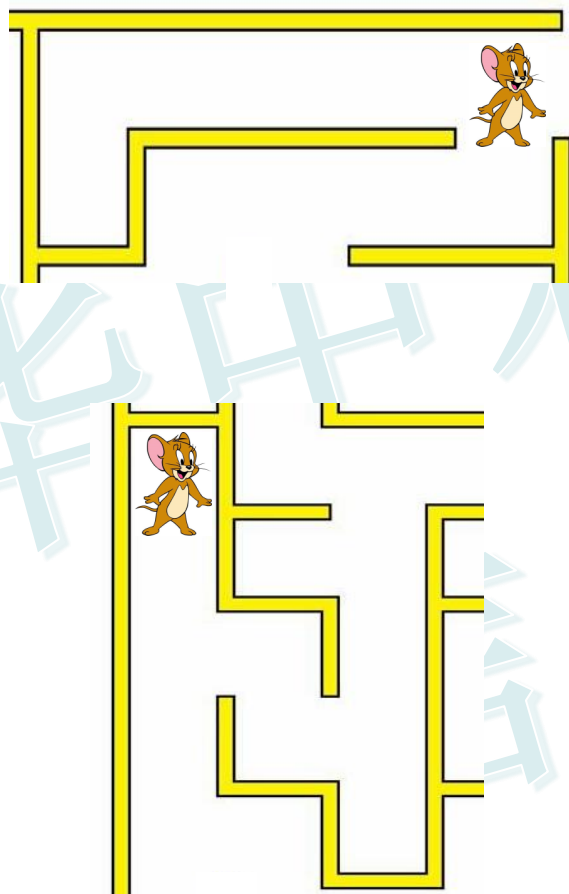
小老鼠走迷宫：单分支选择结构



```
char cKey;  
cin>>cKey;  
if(cKey == 'O')  
    cout<<"I did it!";
```

```
.....  
if(cKey == 'B')  
    cout<<"Move back!";
```

小老鼠走迷宫：单分支选择结构



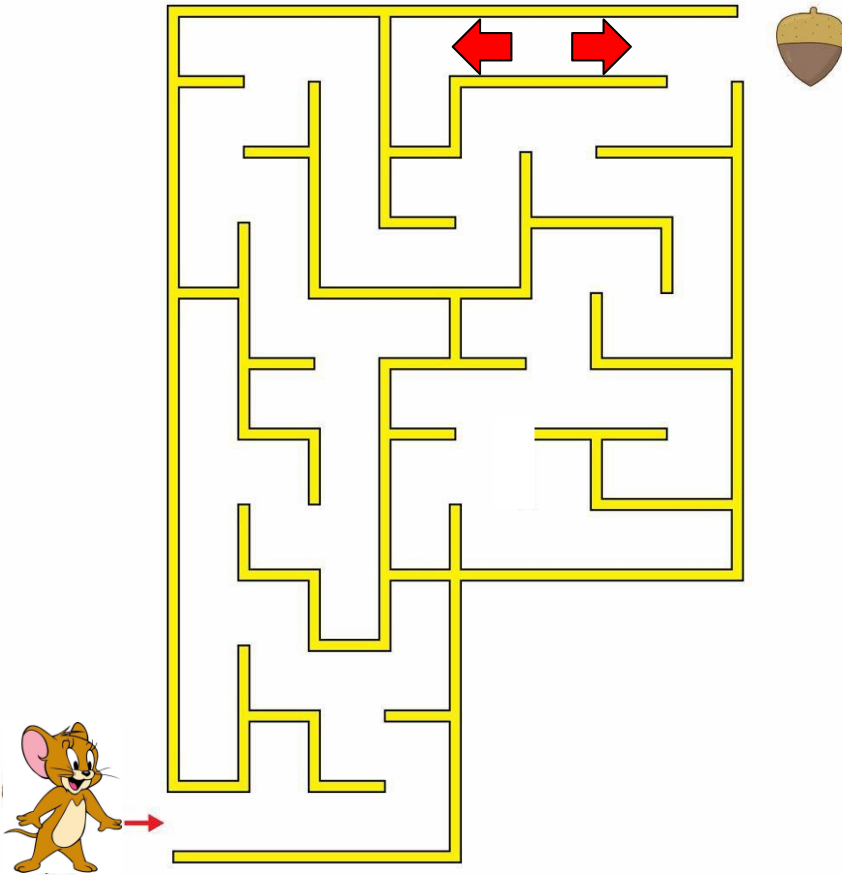
`if (表达式)`
`语句;`

`if (表达式)`
`{ 语句串; }`

- 表达式为 `false` 时不执行语句。表达式总会被执行。

小老鼠走迷宫：if-else双分支选择结构

移动方向：← →

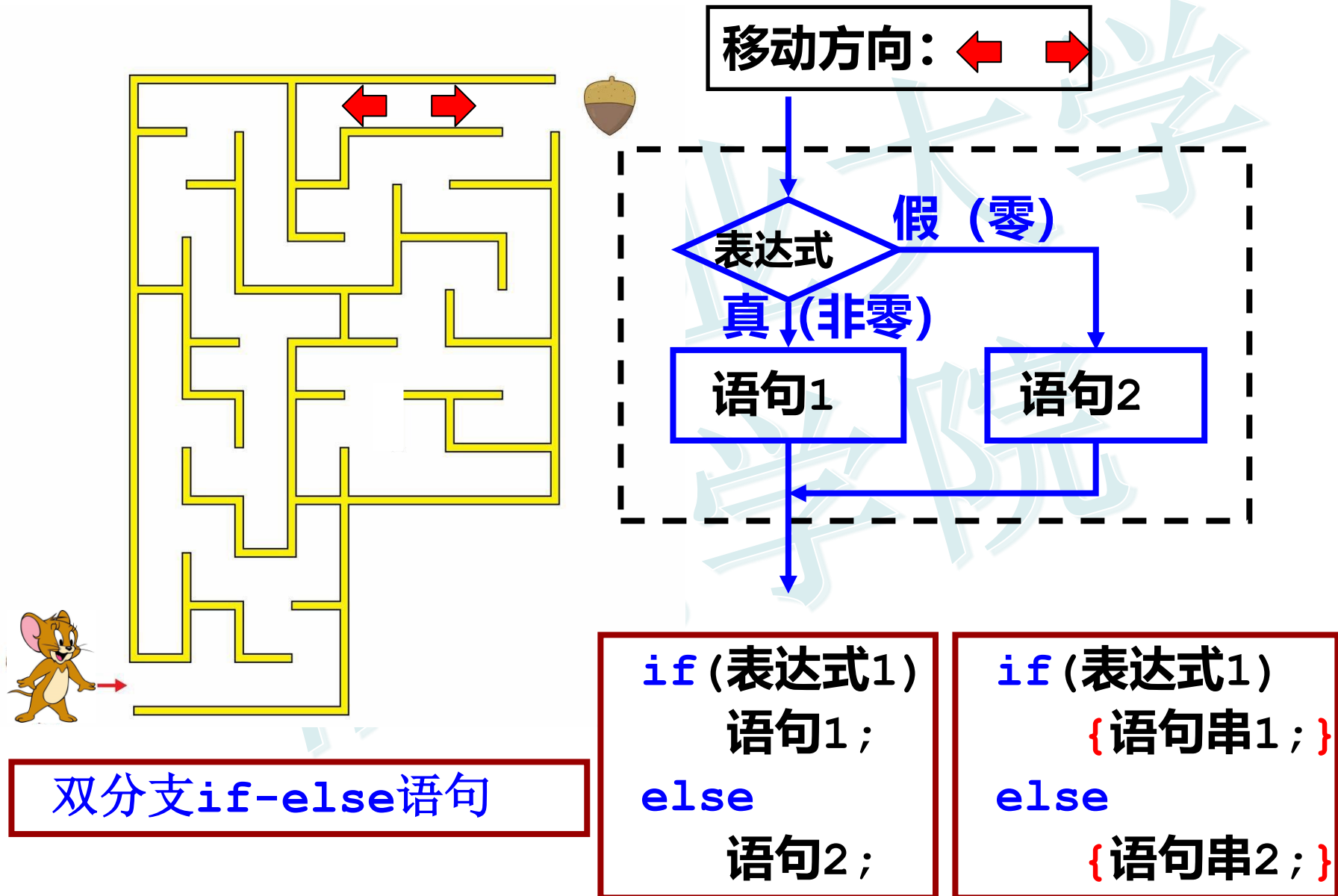


双分支if-else语句

```
char cKey;  
cin>>cKey;  
if (cKey == 'L')  
    cout<<"Move Left";  
else  
    cout<<"Move Right";
```

```
char cKey;  
cin>>cKey;  
if (cKey == 'R')  
    cout<<"Move Right";  
else  
    cout<<"Move Left";
```

小老鼠走迷宫：if-else双分支选择结构

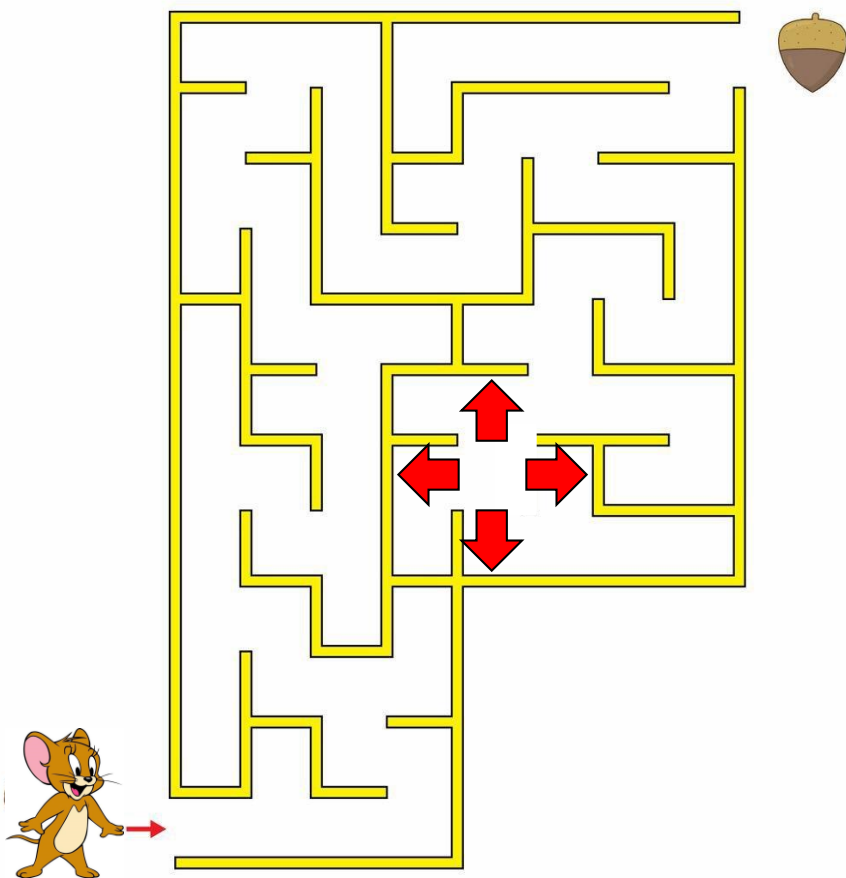


if语句的嵌套



```
char cKey;
cin>>cKey;
if (cKey == 'L')
    cout<<"Move Left";
else
    if (cKey=='R')
        cout<<"Move Right";
    else
        if (cKey=='D')
            cout<<"Move Down";
        else
            if (cKey=='U')
                cout<<"Move Up";
    ...
}
```

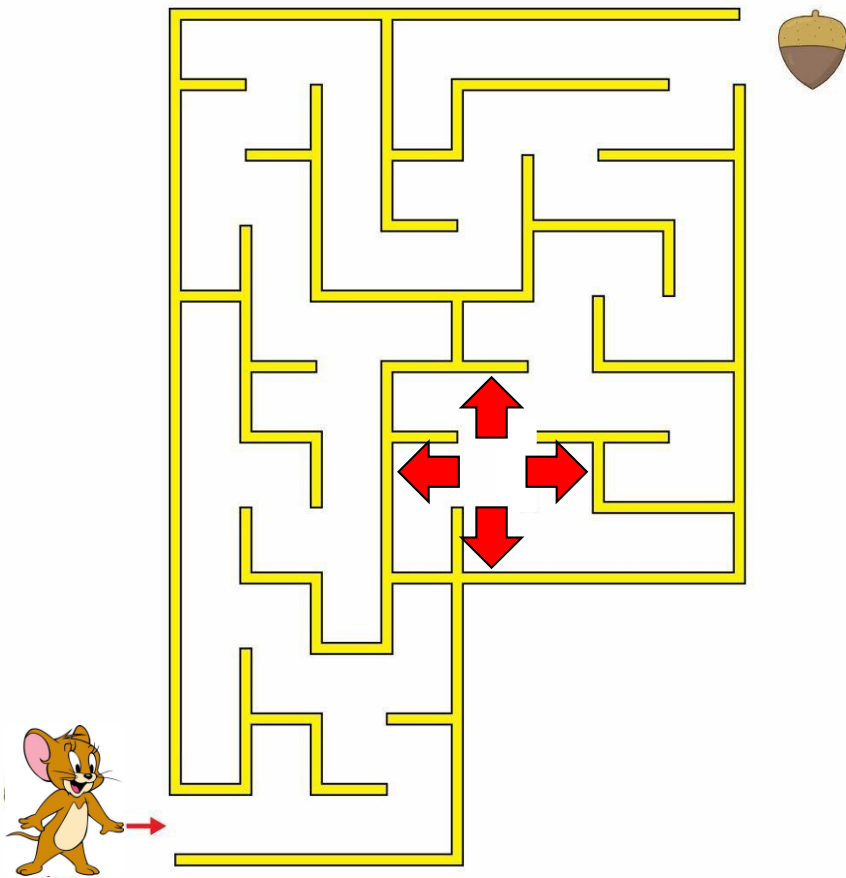
小老鼠走迷宫：if语句的嵌套



if语句的嵌套

```
char cKey;  
cin>>cKey;  
if (cKey == 'L')  
    cout<<"Move Left";  
else  
    if (cKey=='R')  
        cout<<"Move Right";  
    else  
        if (cKey=='D')  
            cout<<"Move Down";  
        else  
            if (cKey=='U')  
                cout<<"Move Up";  
        ...
```

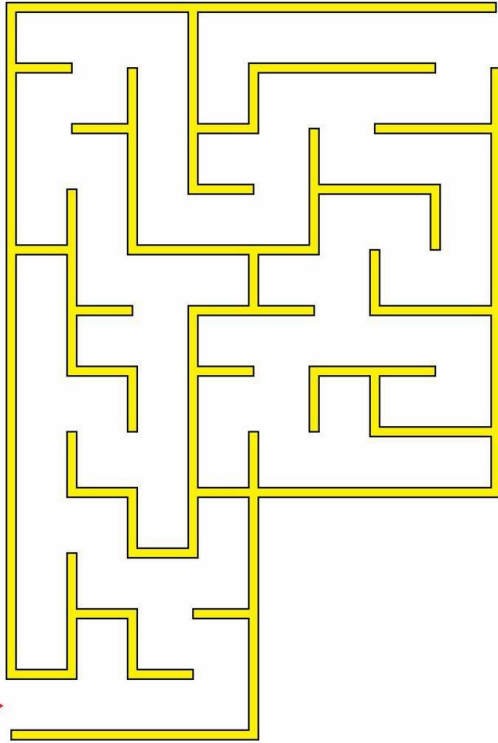
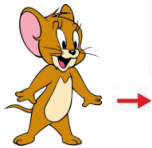

小老鼠走迷宫：if语句的嵌套



if语句的嵌套

```
if (表达式1)
    语句1;
else if (表达式2)
    语句2;
else if (表达式3)
    语句3;
else
    ...
```

小老鼠走迷宫：if语句的嵌套



```
#include<iostream>
using namespace std;
int main()
{ char cKey;
  cin >> cKey;
  if(cKey == 'L')
    cout<<"Move left"<<endl;
  else if(cKey == 'R')
    cout<<"Move right"<<endl;
  else if(cKey == 'U')
    cout<<"Move up"<<endl;
  else if(cKey == 'D')
    cout<<"Move down"<<endl;
  else if(cKey == 'O')
    cout<<"I did it!"<<endl;
  else
    cout<<"Inpt Wrong"<<endl;
  return 0;
}
```

小结

`if`语句单分支选择结构

`if-else`双分支选择结构

`if`语句的嵌套

延伸

修改程序，用多个单分支结构实现初级版本的小老鼠走迷宫程序。