

习题4.9

1. 实现代码

2. 运行截图

1. 实现代码

```
copy.sh | Bash
```

```
1  #!/bin/bash
2  if [ $# -ge 2 ]; then
3      target=$1
4      shift
5  if [ ! -d "$target" ]; then
6      echo "ERROR : $target doesn't exist or it's not a directory."
7      exit
8  fi
9  for file in "$@"; do
10 if [ -f "$file" ]; then
11     cp "$file" "$target"
12     echo "OK : $file has been copied."
13 else
14     echo "ERROR : $file doesn't exist or it's not a file."
15 fi
16 done
17 fi
```

```
cyq@cyq-virtual-machine:~/code4.9$ cat copy.sh
#!/bin/bash
if [ $# -ge 2 ]; then
    target=$1
    shift
    if [ ! -d "$target" ]; then
        echo "ERROR : $target doesn't exist or it's not a directory."
        exit
    fi
    for file in "$@"; do
        if [ -f "$file" ]; then
            cp "$file" "$target"
            echo "OK : $file has been copied."
        else
            echo "ERROR : $file doesn't exist or it's not a file."
        fi
    done
fi
```

2. 运行截图

为验证代码正确性，首先分别用 `mkdir` 和 `touch` 创建了名为 `target_dir` 的空文件夹和三个空文件 `file1`、`file2` 和 `file3`。当前目录下的文件状况如下图 `ls` 运行结果所示。

```
cyq@cyq-virtual-machine:~/code4.9$ mkdir target_dir
cyq@cyq-virtual-machine:~/code4.9$ touch file1
cyq@cyq-virtual-machine:~/code4.9$ touch file2
cyq@cyq-virtual-machine:~/code4.9$ touch file3
cyq@cyq-virtual-machine:~/code4.9$ ls -l
total 8
-rwxrwxr-x 1 cyq cyq 372 Oct 25 17:22 copy.sh
-rw-rw-r-- 1 cyq cyq 0 Oct 25 17:32 file1
-rw-rw-r-- 1 cyq cyq 0 Oct 25 17:32 file2
-rw-rw-r-- 1 cyq cyq 0 Oct 25 17:32 file3
drwxrwxr-x 2 cyq cyq 4096 Oct 25 17:32 target_dir
```

习题要求将参数 2 及其后的文件复制到参数 1 所指示的文件夹下。当参数 1 不存在或不是文件夹时，代码实现了报错处理。如下图所示。

```
cyq@cyq-virtual-machine:~/code4.9$ ./copy.sh a  
cyq@cyq-virtual-machine:~/code4.9$ ./copy.sh a b c  
ERROR : a doesn't exist or it's not a directory.
```

当参数 2 及其后的任意参数不存在或不是文件时，代码实现了报错处理。如下图所示。

```
cyq@cyq-virtual-machine:~/code4.9$ ./copy.sh .. a b c  
ERROR : a doesn't exist or it's not a file.  
ERROR : b doesn't exist or it's not a file.  
ERROR : c doesn't exist or it's not a file.
```

当参数都传入正确时，可以实现习题要求的功能。如下图所示，在运行 `./copy.sh` 前后都分别通过 `ls` 确定了当前文件夹和 target_dir 文件夹中的文件情况，可见运行前 target_dir 中不存在 file1~file3，运行后出现了这三个文件，可以验证代码正确性。

```
cyq@cyq-virtual-machine:~/code4.9$ ls -a  
. .. copy.sh file1 file2 file3 target_dir  
cyq@cyq-virtual-machine:~/code4.9$ cd target_dir  
cyq@cyq-virtual-machine:~/code4.9/target_dir$ ls -a  
. ..  
cyq@cyq-virtual-machine:~/code4.9/target_dir$ cd ..  
cyq@cyq-virtual-machine:~/code4.9$ ./copy.sh target_dir file1 file2 file3  
OK : file1 has been copied.  
OK : file2 has been copied.  
OK : file3 has been copied.  
cyq@cyq-virtual-machine:~/code4.9$ ls -a  
. .. copy.sh file1 file2 file3 target_dir  
cyq@cyq-virtual-machine:~/code4.9$ cd target_dir  
cyq@cyq-virtual-machine:~/code4.9/target_dir$ ls -a  
. .. file1 file2 file3
```

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