

Putting it together

Python Reference

End-to-end mini-projects

A mini-project 小项目 combines earlier ideas: data in a list, a function with selection inside a loop, and printed output. This is also the shape of the AP Create Performance Task.

Project: average mark

```
def average(marks):
    if len(marks) == 0:
        return 0
    return round(sum(marks) / len(marks), 1)

print(average([88, 71, 95, 60])) # 78.5
```

Project: count passes

```
def count_passes(marks, pass_mark=60):
    passes = 0
    for m in marks:
        if m >= pass_mark:
            passes += 1
    return passes

print(count_passes([88, 50, 95, 60])) # 3
```

Project: filter to a new list

```
def merit(marks):
    return [m for m in marks if m >= 80]

print(merit([88, 71, 95, 60])) # [88, 95]
```

The AP Create Task wants a list, a parameterised procedure 过程 that uses selection 选择 and iteration 迭代, and some input/output. Each project above is exactly that shape—build small pieces, then join them.