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Objektorientierte Programmierung, SoSe 17
Übung 01
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Tutorium 10

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1 Aufgabe: Quellcode einbinden   (5 Punkte)

2 Aufgabe: Summen berechnen   (5 Punkte)

Listing 1: Beispiel: Code zu Aufgabe 2

```python
# Definition of functions
# The end of the sum is given is passed as an argument

def sum_1(max):
    sum = 0

    for i in range(1, max+1):
        sum += i

    return sum

def sum_2(max):
    sum = 0

    for i in range(1, max+1):
        sum += 1/i

    return sum

def sum_3(max):
    sum = 0

    for i in range(1, max+1):
        sum += 1/i**2

    return sum

def sum_4(max):
    sum = 0

    for i in range(1, max+1):
        sum += 1 / fac(i)
```

```python
34      return sum

36  def fac(i):
37      if i < 2:
38          return 1

40      faculty = 1

42      for k in range(2, i+1):
43          faculty *= k

45      return faculty

47  # User interaction
48  sum_no = int(input("Which sum would you like to calculate? "
49                  "Choose a Number between 1 and 8:\n"))

51  # Process input
52  if sum_no == 1:
53      print(sum_1(100))
54  elif sum_no == 2:
55      print(sum_1(100000))
56  elif sum_no == 3:
57      print(sum_2(100))
58  elif sum_no == 4:
59      print(sum_2(100000))
60  elif sum_no == 5:
61      print(sum_3(100))
62  elif sum_no == 6:
63      print(sum_3(100000))
64  elif sum_no == 7:
65      print(sum_4(20))
66  elif sum_no == 8:
67      print(sum_4(1000))
68  else:
69      print("Wrong input.")
```

3 Aufgabe: Zeichnen mit tikz II (10 Punkte)