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21BDS0340

Computer Science Lab

Problem Set 2

Question 1

```python
n = int(input())

if n < 0 or n > 100:
    print('Invalid')
else:
    if n > 90:
        print('S')
    elif n > 80:
        print('A')
    elif n > 70:
        print('B')
    elif n > 60:
        print('C')
    elif n >= 50:
        print('D')
    else:
        print('F')
```

Question 2

```python
n = int(input())
m = int(input())

sum1 = sum2 = sum3 = 0

while n > 0:
    rem = n % 10
    n = n // 10
    if rem > m:
        sum1 += 1
    elif rem < m:
        sum2 += 1
    else:
        sum3 += 1

print(sum1)
print(sum2)
print(sum3)
```

Question 3

```python
n = int(input())
list = []

for i in range(n):
    list.append(int(input()))

compare = int(input())
sum1 = sum2 = sum3 = 0

for i in list:
    if i > compare:
        sum1 += 1
    elif i < compare:
        sum2 += 1
    else:
        sum3 += 1

print(list)
print(sum1)
print(sum2)
print(sum3)
```

Question 4

```python
n = int(input())
comps = {}

for i in range(n):
    m = int(input())
    for i in range(m):
        model = input()
        comps[model] = int(input())

lower = int(input())
upper = int(input())

for i in comps:
    if comps[i] >= lower and comps[i] <= upper:
        print(i)
        print(comps[i])
```