In [6]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

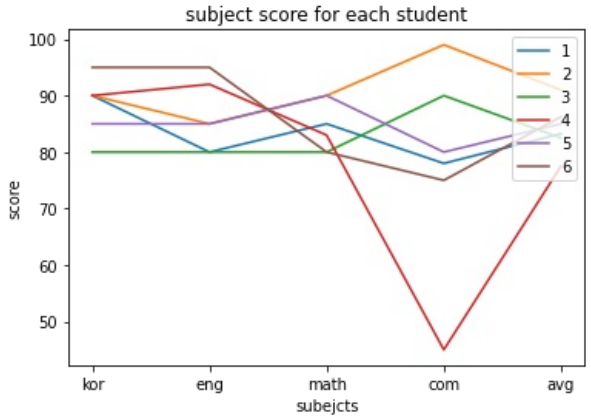
In [7]:
```
data = pd.read_csv("StuData.csv", index_col = 0)
```

In [8]:
```
score = ["국어", "영어", "수학", "Com"]
data['Com'] = [78, 99, 90, 45, 80, 75]
data['평균'] = [sum([(data.loc[j][i]) for i in score])/4 for j in data.index]
avg = []
for i in score + ['평균']:
    avg.append(round(sum([data.loc[j][i] for j in data.index])/6, 2))

data.loc['평균'] = [np.nan] + avg
data.values.tolist()
```

Out[8]:
```
[['홍길일', 90.0, 80.0, 85.0, 78.0, 83.25],
 ['홍길이', 90.0, 85.0, 90.0, 99.0, 91.0],
 ['홍길삼', 80.0, 80.0, 80.0, 90.0, 82.5],
 ['홍길사', 90.0, 92.0, 83.0, 45.0, 77.5],
 ['홍길오', 85.0, 85.0, 90.0, 80.0, 85.0],
 ['홍길육', 95.0, 95.0, 80.0, 75.0, 86.25],
 [nan, 88.33, 86.17, 84.67, 77.83, 84.25]]
```

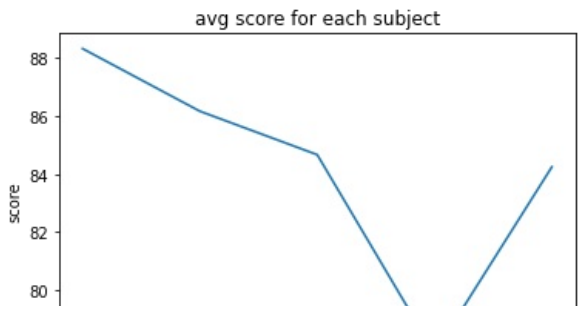
In [9]:
```
# plt에 대해 한글 폰트 적용을 하더라도, jupyter notebook이 실행되는 컴퓨터 내에서 적용되는 형태이므로,
# 한글 폰트 적용을 수행하지 않았다.
# 각 과목의 점수를 각 학생에 대해 나타낸다. 각 선은 한 학생을 의미한다.

name = list(data['이름'])[:-1]
subject = ['kor', 'eng', 'math', 'com', 'avg']
plt.xlabel("subejcts")
plt.ylabel("score")
plt.title("subject score for each student")
for i in enumerate(data.values.tolist()[:-1]):
    plt.plot(subject, i[1][1:], label = i[0] + 1)
plt.legend(loc = 1)
```

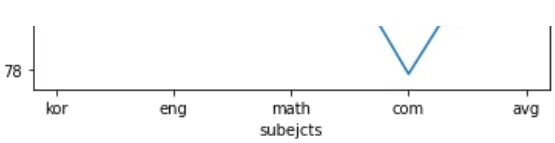
Out[9]:
```
<matplotlib.legend.Legend at 0x7fa551e2e250>
```



In [10]:
```
# 각 과목의 평균 점수를 나타낸다.
plt.xlabel("subejcts")
plt.ylabel("score")
plt.title("avg score for each subject")
plt.plot(subject, data.values.tolist()[-1][1:])
```

Out[10]:
```
[<matplotlib.lines.Line2D at 0x7fa551fc3d30>]
```





In [ ]: