# NATIONAL UNIVERSITY OF MODERN LANGUAGES ISLAMABAD



## Data Mining (LAB)

### Lab Quiz

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# Lab – Quiz

**Find dissimilarity between:**

1.  Jack and Marry

2.  Jack and Jim

3.  Marry and Jim

```python
# dissimilarities

def calculate_dissimilarity(person1, person2):
    r = s = q = 0

    for attr1, attr2 in zip(person1, person2):
        if attr1 == "P" and attr2 == "N":
            r = r+1
        elif attr1 == "N" and attr2 == "P":
            s = s+1
        elif attr1 == attr2:
            q = q+1

    dissimilarity = (r + s) / (q + r + s)
    return dissimilarity

Jack = ['P', 'N', 'P', 'N', 'N', 'N']
Mary = ['P', 'N', 'P', 'N', 'P', 'N']
Jim = ['P', 'P', 'N', 'N', 'N', 'N']

# Calculate dissimilarities
dissimilarity_jack_mary = calculate_dissimilarity(Jack, Mary)
dissimilarity_jack_jim = calculate_dissimilarity(Jack, Jim)
dissimilarity_mary_jim = calculate_dissimilarity(Mary, Jim)

# Output the results
print(f"Dissimilarity between Jack and Mary: {dissimilarity_jack_mary}")
print(f"Dissimilarity between Jack and Jim: {dissimilarity_jack_jim}")
print(f"Dissimilarity between Mary and Jim: {dissimilarity_mary_jim}")
```

```
✓  0.0s
```

```
Dissimilarity between Jack and Mary: 0.16666666666666666
Dissimilarity between Jack and Jim: 0.3333333333333333
Dissimilarity between Mary and Jim: 0.5
```