Programming Assignment 1

Levenshtein Distance Python Code-

```
def editDistance(string1, string2, insdel, subst):
  if insdel >= 0 and subst >= 0:
    rows = len(string1)+1
    cols = len(string2)+1
    dist = [[0 for x in range(cols)] for x in range(rows)]
    for row in range(1, rows):
       dist[row][0] = row * insdel
    for col in range(1, cols):
       dist[0][col] = col * insdel
    for row in range(1, rows):
       for col in range(1, cols):
          if string1[row-1] == string2[col-1]:
             cost = 0
          else:
             cost = subst
          dist[row][col] = min(dist[row-1][col] + insdel,
                               dist[row][col-1] + insdel,
                               dist[row-1][col-1] + cost)
    return dist[row][col]
  else:
    print("The integers must be positive!")
```

Inputs and Outputs:

```
editDistance("kitten", "sitting", insdel = 1, subst = 1)
= 3

editDistance("kitten", "sitting", insdel = 2, subst = 3)
= 8

editDistance("Saturday", "Sunday", insdel = 1, subst = 1)
= 3

editDistance("Saturday", "Sunday", insdel = 2, subst = 3)
= 7
```