**LABTASK 3**

**NAME: SARIM AMIR**

**SID: 63686**

import random

import string

def generaterandomsolution(length=80):

return [random.choice(string.printable) for \_ in range (length)]

def evaluate(solution):

target = list("923,529,297,693,907,542,693,401,280,785,272,470,988,509,592,913,831,740,858,4517")

diff = 0

for i in range(len(target)):

s = solution[i]

t = target [i]

diff += abs(ord(s) - ord(t))

return diff

def mutatesolution(solution):

index = random.randint(0,len(solution) - 1)

solution[index] = random.choice(string.printable)

best = generaterandomsolution()

bestscore = evaluate(best)

while True:

print("\nBest score is",bestscore,"Solution is:", "".join(best))

if bestscore ==0:

break

newsolution = list(best)

mutatesolution(newsolution)

score = evaluate(newsolution)

if evaluate(newsolution)< bestscore:

best = newsolution

bestscore = score

**OUTPUT:**



