**Lab 3**

**Question 1:**

Use string slicing to grab the word 'thin' from inside 'thinktank'.

**Program:**

word = 'thinktank'

print(word[0:4])

**Output:**

thin

**Question 2:**

Use indexing value of your class id to grab character from the string.

**Program:**

class\_id = 'BSE-22F-106'

print(class\_id[10])

**Output:**

6

**Question 3:**

Store ABC in a variable and perform following operations.

**Program:**

alphabets = 'ABCDEFGHIJKLMNOPQRSTUVWXYZ'

**Question 4:**

Print all strings.

**Program:**

print(alphabets)

**Output:**

ABCDEFGHIJKLMNOPQRSTUVWXYZ

**Question 5:**

Grab alternate letters from ABC.

**Program:**

print(alphabets[::2])

**Output:**

ACEGIKMOQSUWY

**Question 6:**

Reverse your string.

**Program:**

print(alphabets[::-1])

**Output:**

ZYXWVUTSRQPONMLKJIHGFEDCBA

**Question 7:**

Grab 8 letters from the string and start from the letter which is the first letter of your name.

**Program:**

print(alphabets[12:20])

**Output:**

MNOPQRST

**Question 8 & 9:**

Write the code in python to generate following output using string logic.

abbcccddddeeee

**Program:**

print('a' + 'b'\*2 + 'c'\*3 + 'd'\*4 + 'e'\*4)

**Output:**

abbcccddddeeee

**Question 10:**

10.Apply the .format method on semester courses

Name of one course

Name of three courses

**Program:**

dsa = 'Data Structures & Algorithms'

stats = 'Probability & Statistics'

sre = 'Software Requirement Engineering'

print('One Course = {}'.format(dsa))

print('Three Courses are: {}, {}, {}.'.format(dsa,stats,sre))

**Output:**

One Course = Data Structures & Algorithms

Three Courses are: Data Structures & Algorithms, Probability & Statistics, Software Requirement Engineering.

**Question 11:**

Write intro about you , convert into list structure and then grab all words excluding 1st and last word, from your introduction.

**Program:**

my\_intro = "My name is Muhaddis I completed my matriculation from Nasra Secondary School and Intermediate from St Patrick's College and recently doing BS Software Engineering in Sindh Madressatul Islam University."

my\_intro2 = my\_intro.split()

print(my\_intro2[1:-1])

**Output:**

['name', 'is', 'Muhaddis', 'I', 'completed', 'my', 'matriculation', 'from', 'Nasra', 'Secondary', 'School', 'and', 'Intermediate', 'from', 'St', "Patrick's", 'College', 'and', 'recently', 'doing', 'BS', 'Software', 'Engineering', 'in', 'Sindh', 'Madressatul', 'Islam']

**Question 12:**

Name of six courses randomly and arrange them in alphabetical order using indexing in .format method.

**Program:**

dsa = 'Data Structures & Algorithms'

stats = 'Probability & Statistics'

sre = 'Software Requirement Engineering'

pf = 'Programming Fundamentals'

ds = 'Discrete Structures'

phy = 'Physics'

print('Courses:\n{0}, {1}, {2}, {3}, {4}, {5}.'.format(dsa,ds,phy,stats,pf,sre))

**Output:**

Courses:

Data Structures & Algorithms, Discrete Structures, Physics, Probability & Statistics, Programming Fundamentals, Software Requirement Engineering.

**Question 13:**

Assign the key words to all semester courses and call them using .format method

**Program:**

print('Courses:\n{dsa}, {stats}, {pf}, {phy}, {ds}, {sre}.'.format(dsa = 'Data Structures & Algorithms',stats = 'Probability & Statistics',sre = 'Software Requirement Engineering'

,pf = 'Programming Fundamentals',ds = 'Discrete Structures',phy = 'Physics'))

**Output:**

Courses:

Data Structures & Algorithms, Probability & Statistics, Programming Fundamentals, Physics, Discrete Structures, Software Requirement Engineering.

**Question 14:**

Apply float formatting method on following numbers with precision of 4

#a.200.340982589

#b.40/66611

#c.1.534854395

**Program:**

a = 200.340982589

b = 40/66611

c = 1.534854395

print('{:.4f}'.format(a))

print('{:.4f}'.format(b))

print('{:.4f}'.format(c))

**Output:**

200.3410

0.0006

1.5349