**Assignment (of Hands on Python programming course on edugrad)**

**Q.1)** With a given integral number n, write a program to generate a dictionary that contains (i, i\*i) such that is an integral number between 1 and n (both included). and then the program should print the dictionary.

Example -

Input - 8

Output - {1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64}

**Q.2)** Write a Python program to create the multiplication table (from 1 to 10) of a number.

Expected Output:

Input a number: 6

6 x 1 = 6

6 x 2 = 12

6 x 3 = 18

6 x 4 = 24

6 x 5 = 30

6 x 6 = 36

6 x 7 = 42

6 x 8 = 48

6 x 9 = 54

6 x 10 = 60

**Q.3)** Write a program to add all the numbers of a List.

Given the numbers 6, 50, 100, 7000. Store them in a List called items. Store the sum of all the numbers in the List items into a variable called total. Print the sum on the screen using the variable total.

**Q.4)** a) Ask user to enter name, age, city and course using comma as a separator. Store these values in a tuple called student

b) Store the count of total number of elements present in the tuple student in a variable called

tup\_count.

Display the value of tup\_count on the screen

c) Using the tuple variable student, store the student data in separate variables namely s\_name,

s\_age,

s\_city and s\_course.

d) Display the student information on the screen using the four variables created above.

**Q.5)** a) Create a dictionary variable called colors in Python having keys as col1, col2 and col3

containing values Red, Blue, Yellow respectively.

b) Add another key col4 into the colors Dictionary having value as Green.

c) Update the col2 values as Orange

d) Print the dictionary on the screen

e) Create a new Dictionary object colors\_new from the colors Dictionary, having the keys col1

and col2

Instruction – Use the fromkeys() method

f) Print all the values of both the Dictionary colors and colors\_new on the screen.

g) Remove all the elements from the Dictionary colors and print its content on the screen. (It should print an empty Dictionary)

h) Print the value of key col2 from the Dictionary colors\_new on the screen

**Q.6)** Using range() function, make a list containing all the prime numbers between 1 to 100.

**Q.7)** Write a Python function called ftn\_count\_upper\_lower that accepts a string and calculate the

number of uppercase letters and lowercase letters.

Sample String : &amp;#39;Hello My name is Ram&amp;#39;

Expected Output :

No. of Uppercase characters : 3

No. of Lowercase Characters : 13

(Hint:- Make use of islower() or isupper() function to check whether character of string entered is in lowercase or uppercase respectively.)

**Q.8)** In a company named XYZ, employee data is recorded in a spreadsheet called “employee\_list.csv”.

Few more people have joined this company and their data is stored in a file “new\_records.csv”. This data has to be added in the “employee\_list.csv” based on following condition -

a) The format of “employee\_list.csv” is employee code, first name, last name, home city, age, current city

b) The format of “new\_records.csv” is employee code, full name, home city, age, current city

c) The employee code column in “new\_records.csv” is prefixed by a three digit code related to

type of employee as defined below

emp – for permanent employees

other than emp – for contractual and other type of employees

d) Add only the permanant employees in the employee\_list.csv

e) Create a new separate file for the contractual and other type of employees, file name will be

“contractors\_list.csv”

f) the employee code recorded in the employee\_list.csv will be only integer, you need to remove character prefixed to the employee code

g)handle the file and number-type exceptions wherever appropriate