Programming Assignment 1: Dictionary

Due on 2020-10-22, 23:59 IST

You have seen in the videos that how powerful dictionary data structure is.
In this assignment, given a number **n**, you have to write a program that generates a dictionary **d** which contains **(i, i*i)**, where **i** is from **1 to n (both included)**.
Then you have to just print this dictionary **d**.

Example:
Input: 4

will give output as
{1: 1, 2: 4, 3: 9, 4: 16}

Input Format:
Take the number **n** in a single line.

Output Format:
Print the dictionary **d** in a single line.

Example:

Input:
8

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

Explanation:

Here **n** is 8, we will start from **i=1**, hence the first element of the dictionary is **(1: 1)**, as i becomes **2**, the second element of the dictionary becomes **(2: 4)** and so on.
Hence the output will be **{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64}**.

Your last recorded submission was on 2020-10-12, 11:23 IST
Select the Language for this assignment. Python3

```
n = int(input())

dict = {}

for i in range(1, n+1):
    dict.update({i: i*i})

print(dict)
```

You may submit any number of times before the due date. The final submission will be considered for grading.
This assignment has Public Test cases. Please click on "Compile & Run" button to see the status of Public test cases. Assignment will be evaluated only after submitting using Submit button below. If you only save as or compile and run the Program , your assignment will not be graded and you will not see your score after the deadline.

Save as Draft | Compile & Run | Submit | Reset

Private Test cases used for Evaluation	Status
Test Case 1	Passed
Test Case 2	Passed
Test Case 3	Passed

Programming Assignment 2: Robot and the Charger

Due on 2020-10-22, 23:59 IST

There is a robot which wants to go the charging point to charge itself. The robot moves in a 2-D plane from the original point (0,0). The robot can move toward UP, DOWN, LEFT and RIGHT with given steps. The trace of robot movement is shown as the following: UP 5 DOWN 3 LEFT 3 RIGHT 2 Then, the output of the program should be: 2 The numbers after the direction are steps. Write a program to compute the distance between the current position after a sequence of movement and original point. If the distance is a float, then just print the nearest integer (use round() function for that and then convert it into an integer). Input Format: The first line of the input contains a number n which implies the number of directions to be given. The next n lines contain the direction and the step separated by a space. Output Format: Print the distance from the original position to the current position. Example: Input: 4 UP 5 DOWN 3 LEFT 3 RIGHT 2 Output: 2 Explanation: After the movements, the robot is at the position (-1, 2). Distance from the (0, 0) to the point (-1, 2) is calculated as The round value of which is 2.0, and int value is 2. NOTE: Import math library and use the sqrt() function of the math library to compute the distance. Guide to calculate the distance from the point (a,b) to (c,d) is here Guide to use math sqrt function is here.

Your last recorded submission was on 2020-10-12, 11:28 IST

Select the Language for this assignment. Python3

```
import math

pos=[0,0]
moves={"UP":[0,1],
       "DOWN":[0,-1],
       "LEFT":[-1,0],
       "RIGHT":[1,0]}
data = list()
num = int(input())

for i in range(int(num)):
  n = input()
  data.append(n)

for inp in data:
  parts=inp.split()
  mv=parts[0]
  val=parts[1]
  if mv in moves and val.isnumeric():
    pos[0] += moves[mv][0]*int(val)
    pos[1] += moves[mv][1]*int(val)

distance=math.sqrt(pos[0]**2 + pos[1]**2)
print(round(distance))
```

You may submit any number of times before the due date. The final submission will be considered for grading.

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Test Case 3	Passed

Programming Assignment 3: Function and Dictionary

Due on 2020-10-22, 23:59 IST

Given a number n, define a function named printDict() which can print a dictionary where the keys are numbers between 1 and n (both included) and the values are square of keys.
The function printDict() doesn't take any argument.

Input Format:
The first line contains the number n.

Output Format:
Print the dictionary in one line.

Example:

Input:
5

Output:
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25}

NOTE: You are supposed to write the code for the function printDict(). The function has already been called.

Your last recorded submission was on 2020-10-12, 04:20 IST

Select the Language for this assignment. Python3

```
n = int(input())

dict = {}

for i in range(1, n+1):
  dict.update({i: i**2})

def printDict():
  print(dict)

printDict()
```

You may submit any number of times before the due date. The final submission will be considered for grading.
This assignment has Public Test cases. Please click on "Compile & Run" button to see the status of Public test cases. Assignment will be evaluated only after submitting using Submit button below. If you only save as or compile and run the Program , your assignment will not be graded and you will not see your score after the deadline.

Save as Draft | Compile & Run | Submit | Reset

Private Test cases used for Evaluation	Status
Test Case 1	Passed
Test Case 2	Passed
Test Case 3	Passed