

Programming Pals Trio

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Problem :1

In a student exchange program between Daffodil International University (DIU) and another institution, students are randomly paired up with counterparts from the partner institution. The DIU students participating in the exchange program and their corresponding IDs are as follows:

Nabil: ID 5350

Faruk: ID 5874

Shahin: ID 5646

A DIU student selects a partner from the partner institution by entering the ID of the student from the partner institution. The system then randomly selects a student from the partner institution as well.

After both selections are made, the program compares the choices and prints out the outcome.

If the DIU student selects a partner and the partner institution randomly selects the same DIU student, it results in a humorous situation called " Congratulations you are selected ,Enjoy journey with proper instrument."

Let's illustrate this scenario with an example:

DIU student Nabil (ID 5350) selects a partner from the partner institution.

The system randomly selects a partner from the partner institution, let's say Shahin (ID 5646).

The program checks if any specific pairing condition is met. If not, it prints out the selected partners.

Solve the problem with proper code :

```
import random
import sys

from enum import Enum
class diu_student(Enum):
    Nabil =5350
    Faruk =5874
    Shahin =5646

student_Choice =input('Enter :\n5350 for Nabil\n5874 for Faruk\n5646 for Shahin\n')
student =int(student_Choice)

choice=['5350','5646','5874']
diu_random =random.choice(choice)
diu_chooice =int(diu_random)

if student<5350 or student>5874:
    sys.exit('You must Type any Valid Id')

print('You Type:'+str(diu_student(student)).replace('diu_student.',' '))
print('daffodil Choose:'+str(diu_student(diu_chooice)).replace('diu_student.',' '))

if student==5350 and diu_chooice ==5646:
    print("Daffodil selected Nabil")
elif student==5874 and diu_chooice ==5350:
    print("Daffodil selected Faruk")
elif student==5646 and diu_chooice ==5874:
    print("Daffodil selected SHAHIN")
elif student==diu_chooice:
    print('Congratulations you are selected ,Enjoy journey with proper instrument')
else:
    print('Nobody is Selected')
```

Problem :2

You are tasked with creating a program that calculates the grades of students based on their exam scores. The program should take input in the form of a dictionary where the keys are student names and the values are lists containing their exam scores. The program should calculate the average score for each student and assign a grade based on the following criteria:

A: Average score ≥ 90

B: $80 \leq \text{Average score} < 90$

C: $70 \leq \text{Average score} < 80$

D: $60 \leq \text{Average score} < 70$

F: Average score < 60

Your program should return a dictionary where the keys are student names and the values are their corresponding grades.

Solve the problem with proper code :

```
def grad():  
    student_scores = {}  
    num_students = int(input("Enter the number of students: "))
```

```

    for i in range(num_students):
        student_name = input(f"Enter the name of {i+1}th student : ")
        scores = input(f"Enter the exam scores of {student_name} separated by
spaces: ").split()
        scores = [int(score) for score in scores]
        student_scores[student_name] = scores

    grades = {}
    for student, scores in student_scores.items():
        average_score = sum(scores) / len(scores)
        if average_score >= 90:
            grades[student] = "A"
        elif 80 <= average_score < 90:
            grades[student] = "B"
        elif 70 <= average_score < 80:
            grades[student] = "C"
        elif 60 <= average_score < 70:
            grades[student] = "D"
        else:
            grades[student] = "F"
    return grades

print("Calculating grades for students...")
grades = grad()
print("----- Grades calculated: -----")
for student, grade in grades.items():
    print('\n');
    print(f"{student}: {grade}")

```