INTERNSHIP TASKS

Day 9:
EXERCISE – 9

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Course : Python

Org : IGIAT – VSKP

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Exercise Level 1

```
#Task 1:
#Get user input, and print the appropriate message if user is 18 or older give feedback : You are old enough to drive. If below 18 give feedback to wait for missing amount of years
try:
    age = int(input("Enter your age: "))
    if(age >= 18):
        print("You are old enough to drive");
    else:
        print(f"You need {18-age} more years to learn to drive");
except ValueError as T:
    print("Invalid Input is given");
#Task 2:
#Compare the values of my_age and your_age using if..else. Who is older me or you?, use input function to get the age as input. You can use a nested condition to print 'year' for 1 year diff. in age, and 'years' for bigger differences and a custom text if my_age =  your_age
my_age = 20;
try:
    your_age = int(input("Enter your age: "));
    if(my_age < your_age):
        age_diff = your_age - my_age;
        if(age_diff > 1):
            print("You are ", age_diff, " years older than me.");
        if((age_diff <= 1) and (age_diff != 0)):
            print("You are ", age_diff, " year older than me.");
    elif(my_age > your_age):
        age_diff = my_age - your_age;
        if(age_diff > 1):
            print("I am ", age_diff, " years older than you");
        if((age_diff <= 1) and (age_diff != 0)):
            print("I am ", age_diff, " year older than you");
    else:
        print("Your age is equal to mine!");
except ValueError as e:
    print("Invalid Input");
#Task 3:
#Get two number from the user input. If a is greater than b return a is greater than b, if a is less than b return a is smaller than b, else a is equal to b
try:
    a = int(input("Enter the number one : "));
    b = int(input("Enter the number two : "));
    if(a > b):
        print(a , "is greater than", b);
    elif(b > a):
        print(a, "is less than", b);
    else:
        print(a, "is equal to", b);
except ValueError as e:
    print("Invalid Input");
```

Outputs:

```
/home/codespace/.python/current/bin/python3 "/workspaces/codespaces-blank/IGIAT Internship Python Tasks/30DaysOfPython/day_9/exercises_1.py"
@DevaManikantaSala ➜/workspaces/codespaces-blank $ /home/codespace/.python/current/bin/python3 "/workspaces/codespaces-blank/IGIAT Internship Python Tasks/30DaysOfPython/day_9/exercises_1.py"
Enter your age: 20
You are old enough to drive
Enter your age: 20
Your age is equal to mine!
Enter the number one : 1
Enter the number two : 2
1 is less than 2
@DevaManikantaSala ➜/workspaces/codespaces-blank $
```

Exercise Level 2

```
#Task 1
# Write a code which gives grade to students according to their scores
try:
    score = int(input("Enter your score: "));
    if(score <= 100 and score >= 80):
        print("Grade : A");
    elif(score <= 89 and score >= 70):
        print("Grade : B");
    elif(score <= 69 and score >= 60):
        print("Grade : C");
    elif(score <= 59 and score >= 50):
        print("Grade : D");
    else:
        print("Grade : F");
except ValueError as e:
    print("Invalid Input is given");
#Task 2
# Check if the season is Autumn, Winter, Spring or Summer.
#     September, October, November - Autumn
#     December, January, February - Winter
#     March, April, May - Spring
#     June, July, August - Summer

try:
    Summer = {'January' : 1, 'February' : 2, 'December' : 12}
    Autumn = {'September' : 9, 'October' : 10, 'November' : 11}
    Winter = {'March' : 3, 'April' : 4, 'May' : 5}
    Spring = {'June' : 6, 'July' : 7, 'August' : 8}
    month = input("Enter your month or month number: ");
    if(month.isnumeric()):
        month = int(month);
        if(month in Summer.values()):
            print(month, "is in Summer Season");
        elif(month in Autumn.values()):
            print(month, "is in Autumn Season");
        elif(month in Winter.values()):
            print(month, "is in Winter Season");
        elif(month in Spring.values()):
            print(month, "is in Spring Season");
        else:
            print(month, "is invalid month!");
```

```
    else:
        if(month in Summer.keys()):
            print(month, "is in Summer Season");
        elif(month in Autumn.keys()):
            print(month, "is in Autumn Season");
        elif(month in Winter.keys()):
            print(month, "is in Winter Season");
        elif(month in Spring.keys()):
            print(month, "is in Spring Season");
        else:
            print(month, "is invalid month!");
except Exception as e:
    print("Invalid Input!");

#Task 3:
#Based on the user input if a fruit doesn't exist in the list add the fruit to the list and
print the modified list. If the fruit exists print - That fruit already exist in the list
fruits = ['banana', 'orange', 'mango', 'lemon'];
try:
    fruit = input("Enter the fruit name : ");
    if(fruit.isnumeric() or fruit.isdecimal() or fruit.isdigit()):
        raise ValueError;
    elif(fruit.lower() in fruits):
        print("That fruit already exist in the list");
    else:
        fruits.append(fruit);
        print("New Fruit added!");
        print("New List :", fruits);
except ValueError as E:
    print("Invalid Fruit Name!");
```

Output:

```
@DevaManikantaSala →/workspaces/codespaces-blank $ /home/codespace/.python/current/bin/python3 "/workspaces/codespaces-blank/IGIAT Internship Python Tasks/30DaysOfPython/day_9/exercises_2.py"
Enter your score: 76
Grade : B
Enter your month or month number: October
October is in Autumn Season
Enter the fruit name : Apple
New Fruit added!
New List : ['banana', 'orange', 'mango', 'lemon', 'Apple']
@DevaManikantaSala →/workspaces/codespaces-blank $
```

Exercise Level 3

```
person = {
    'first_name' : 'Deva Manikanta',
    'last_name' : 'Sala',
    'age' : 20,
    'country' : 'India',
    'is_married' : False,
    'skills' : ['Java', 'Python', 'Html', 'CSS', 'Sqlite', 'JavaScript'],
    'address' : {
        'colony' : 'APHB colony',
        'pincode' : '534260'
    }
}
```

```
#Question 1: Check if person dictionary has skills key, if so print out the middle skill in
the skills list
try:
    if('skills' in person.keys()):
        print("Middle Skill : ", person['skills'][(int(len(person['skills']) / 2))]);
except Exception as E:
    pass;
#Question 2: Check if the person dictionary has skills key, if so check if the person has
'Python' skill and print out the result.
if('skills' in person.keys()):
    if('Python' in person['skills']):
        print("Yes! He has python skill");
    else:
        print("No! He doesn't has python skill");
else:
    print("There are no skills of this person!");

#Question 3: If a person skills has only JavaScript and React print he is a frontend dev,
# if the person skill has Node, Python, SQLite/MySql print he is a backend dev,
# if he has both frontend and backend skills the print fullstack developer
# else print he holds unknown title

if('JavaScript' in person['skills'] and 'React' in person['skills']):
        if('Node' in person['skills'] and 'Python' in person['skills'] and ('Sqlite' in
person['skills'] or 'Mysql' in person['skills'])):
            print("He is a Full Stack Developer");
        else:
            print("He is a Frontend Developer");
elif('Node' in person['skills'] and 'Python' in person['skills'] and ('Sqlite' in
person['skills'] or 'Mysql' in person['skills'])):
    print("He is a Backend Developer");
else:
    print("Unknown Title");

#Question 4: If the person is married and if he lives in Finland, print the information
if(person['is_married'] and person['country'] == 'Finland'):
    print("Yes! The person is married and lives in Finland!");
elif(person['is_married'] == False and person['country'] != 'Finland'):
    print("No! The person is not married and doesn't lives in Finland!");
    print("He lives in", person['country']);
else:
    print("There is no appropriate information!");
```

Output: