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1. Define two variables and assign them values of 100 and 29. After this, make the interpreter sum up the two numbers and multiply their result by 3. Calculate the 2nd exponent of the previous number and save it to a new variable. Make the program print the result in the following way: The result of the calculation was: 149769. Make sure you use valid variable names and name your variables meaningfully. Make sure that output of your program has indentation as shown in the above example.

```
In [29]: first_no=100
second_no=29
# sum and multiply the two number
get_first_result=(first_no+second_no)*3
exponent=get_first_result**2
print(exponent)
```

149769

2. Write a program that creates a password by asking the user to input their name, age, year of birth. Save all in separate variables using the right type for each of them. Program should create the password in following way: takes last two digits of year of birth, first 3 letters from name, and the 2nd power of the age according to the example below: Name: John Year of birth: 1995 Age: 26 Password: 95Joh676 Hint: to get the desired output in print() all variables has to be type str.

```
In [37]: # asking personal information in order to make password
name=input("what is your name?")
age=int(input("what is your age?"))
birth=input("what is your year of birth")
print(f"name:{name}")
print(f"Age:{age}")
print(f"brith:{birth}")
# creating password from the information
print(f"password:{birth[-2:]}{name[0:3]}{age**2}")
```

```
what is your name?john
what is your age?16
what is your year of birth1995
name:john
Age:16
brith:1995
password:95joh256
```

3. Write a program that asks for two numbers. If both numbers are even, the program prints "Both numbers are even." If only one of the numbers is even, the program prints "One of the numbers is even.". Finally, if neither of the numbers is even, the program prints "Both numbers are odd". First number: 5 Second number: 6 One of the numbers is even

```
In [31]: first=int(input("Enter the first number"))
second=int(input("Enter second number"))
#checking the numbers are even or odd
if first%2 ==0 and second%2 ==0:
    print("Both numbers are even")
elif first%2==0 and second%2!=0:
    print("One of the numbers is even")
```

```

elif first%2!=0 and second%2==0:
    print("One of the numbers is even")
elif first%2!=0 and second%2 !=0:
    print("Both numbers are odd")

```

Enter the first number1
Enter second number4
One of the numbers is even

4.Create a program, which asks the user for a number, and calculates the sum of all positive numbers from 0 to the usergiven input.If the user gives the number 4, the program calculates the sum 0+1+2+3, if 7, the calculation is 0+1+2+3+4+5+6. Program operates as bellow:Give an integer: 5The sum was: 10

```

In [32]: number=int(input("what is n"))
get_result=0
for i in range(0,number):
    #adding each number to get_reesult
    get_result +=i
print(get_result)

```

what is n5
10

5.Create a program that can be used as a guessing game. The game is played by Dealerand Player. Dealergenerates a randominteger number between 0 and 10. Player has to guess it. The program should take input from Player as long as Player inputs same numberas Dealer's input was. Player getsadviceto choose greater or smaller numbers in next choice.Finally,program has to also displaythe number of tries until the number is guessed.Program operates as follow:Player: 2Try a greater number.Player: 7Try a smaller number.Player: 5That's right! Number of tries: 3 Hint: import random and generate random numbers by using random.randint() in the desired range

```

In [33]: import random
get_guess=random.randint(0,10)

tries=0
# this will be continuing unti user get the right answer
while True:
    guess=int(input("Player:"))
    tries+=1
    if guess==get_guess:
        print(f"That's right! Number of tries:{tries}")

        break
    elif guess<get_guess:
        print("Try a greater number")
        continue
    elif guess>get_guess:
        print("Try a smaller number")
        continue

```

Player:4
Try a smaller number
Player:5
Try a smaller number
Player:6
Try a smaller number
Player:3
That's right! Number of tries:4

As a bonus (2 point s) you can extend your program to allow secon d play where another player can play and finally also display f i Player 1 or Player2 wins, by comparing the numbers of tries and choosing the one

with smaller number . Player 1 : 2 Try a greater number. Player 1 : 7 Try a smaller number. Player 1 : 5
That's right! Number of tries: 3 Player2: 2 Try a greater number. Player2: 7 Try a smaller number. Player2: 6
Try a smaller number. Player2: 5 That's right! Number of tries: 4 Winer is Player 1

```
In [36]: import random
get_guess=random.randint(0,10)

tries=[0,0]
while True:
    guess=int(input("Player1:"))
    tries[0]+=1
    if guess==get_guess:
        print(f"That's right! Number of tries:{tries[0]}")

        break
    elif guess<get_guess:
        print("Try a greater number")
        continue
    elif guess>get_guess:
        print("Try a smaller number")
        continue

while True:
    guess=int(input("Player2:"))
    tries[1]+=1
    if guess==get_guess:
        print(f"That's right! Number of tries:{tries[1]}")

        break
    elif guess<get_guess:
        print("Try a greater number")
        continue
    elif guess>get_guess:
        print("Try a smaller number")
        continue

# checking who is the winner
if tries[0]<tries[1]:
    print("winner is player 1")
elif tries[0]>tries[1]:
    print("winner is player 2")
elif tries[0]==tries[1]:
    print("Draw")
```

```
Player1:2
Try a greater number
Player1:5
Try a greater number
Player1:7
Try a smaller number
Player1:6
That's right! Number of tries:4
Player2:4
Try a greater number
Player2:7
Try a smaller number
Player2:6
That's right! Number of tries:3
winner is player 2
```

In []: