Python Programs

1. Print 1 means Heads 0 means Tails

#Write the rest of your code below this line 👇

import random

coin\_output = random.randint(0,1)

#print(coin\_output)

if coin\_output==1:

print("Heads")

else:

print("Tails")

#############-----------------------------#############--------------------------##############

1. How to find the length of the given string

print(len(input("What is your name? ")))

#############-----------------------------#############--------------------------##############

1. Band name Generator

print("Welcome to the Band Name Generator.")

city\_name=input("What's the name of the city you grew up in? \n")

pet\_name=input("What's your pet's name? \n")

print("your band name could be "+city\_name+" "+pet\_name)

#############-----------------------------#############--------------------------##############

1. How to find the sum of each digits in the given number

# 🚨 Don't change the code below 👇

two\_digit\_number = input("Type a two digit number: ")

# 🚨 Don't change the code above 👆

print(type(two\_digit\_number))

####################################

#Write your code below this line 👇

first\_number=int(two\_digit\_number[0])

second\_number=int(two\_digit\_number[1])

print(first\_number+second\_number)

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1. BMI Calculator

# 🚨 Don't change the code below 👇

height = input("enter your height in m: ")

weight = input("enter your weight in kg: ")

# 🚨 Don't change the code above 👆

#Write your code below this line 👇

# bmi = int(weight)/(int(height)\*\*2)

# print(int(bmi))

new\_weight=int(weight)

new\_height=float(height)

bmi=new\_weight/(new\_height\*\*2)

new\_bmi=int(bmi)

print(new\_bmi)

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1. How to find the remaining life in weeks if you live till given age say 90

# 🚨 Don't change the code below 👇

age = input("What is your current age? ")

# 🚨 Don't change the code above 👆

#Write your code below this line 👇

years\_remaining = 90-int(age)

days\_remaining = years\_remaining\*365

month\_remaining = years\_remaining\*12

weeks\_remaining = years\_remaining\*52

print(f"You have {days\_remaining} days, {weeks\_remaining} weeks, and {month\_remaining} months left.")

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1. Tip calculator

#If the bill was $150.00, split between 5 people, with 12% tip.

#Each person should pay (150.00 / 5) \* 1.12 = 33.6

#Format the result to 2 decimal places = 33.60

#Tip: There are 2 ways to round a number. You might have to do some Googling to solve this.💪

#Write your code below this line 👇

print ("Welcome to the tip calculator.")

bill\_amount=float(input("What was the total bill? $"))

tip\_percent=int(input("What percentage tip would you like to give? 10, 12 or 15? "))

persons=int(input("How many people to split the bill? "))

tip\_amount=float(bill\_amount\*(tip\_percent/100))

total\_Payable = tip\_amount+bill\_amount

payable\_forOnePerson = round(total\_Payable/persons,2)

print(f"Each person should pay: ${payable\_forOnePerson}")

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1. BMI calculator 2.0

# 🚨 Don't change the code below 👇

height = float(input("enter your height in m: "))

weight = float(input("enter your weight in kg: "))

# 🚨 Don't change the code above 👆

#Write your code below this line 👇

bmi = weight/height\*\*2

bmi = round(bmi)

if bmi>35:

print(f"Your BMI is {bmi}, you are clinically obese.")

elif bmi>30:

print(f"Your BMI is {bmi}, you are obese.")

elif bmi>25:

print(f"Your BMI is {bmi}, you are slightly overweight.")

elif bmi>18.5:

print(f"Your BMI is {bmi}, you have a normal weight.")

else:

print(f"Your BMI is {bmi}, you are underweight.")

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1. How to find the given year is leap or not?

# 🚨 Don't change the code below 👇

year = int(input("Which year do you want to check? "))

# 🚨 Don't change the code above 👆

#Write your code below this line 👇

if year%4 == 0:

if year%100 == 0:

if year%400 == 0:

print("Leap year.")

else:

print("Not leap year.")

else:

print("Leap year.")

else:

print("Not leap year.")

#############-----------------------------#############--------------------------##############

1. Pizza order

# 🚨 Don't change the code below 👇

print("Welcome to Python Pizza Deliveries!")

size = input("What size pizza do you want? S, M, or L: ")

add\_pepperoni = input("Do you want pepperoni? Y or N: ")

extra\_cheese = input("Do you want extra cheese? Y or N: ")

# 🚨 Don't change the code above 👆

#Write your code below this line 👇

small\_pizza = 15

medium\_pizza = 20

large\_pizza = 25

top\_up\_small = 2

top\_up = 3

add\_cheese = 1

total=0

if size == "S":

total = small\_pizza

if add\_pepperoni == "Y":

total += top\_up\_small

elif size == "M":

total = medium\_pizza

if add\_pepperoni == "Y":

total += top\_up

elif size == "L":

total = large\_pizza

if add\_pepperoni == "Y":

total += top\_up

if extra\_cheese == "Y":

total += add\_cheese

print(f"Your final bill is: ${total}.")

else:

print(f"Your final bill is: ${total}.")

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1. Love Calculator

# 🚨 Don't change the code below 👇

print("Welcome to the Love Calculator!")

name1 = input("What is your name? \n")

name2 = input("What is their name? \n")

# 🚨 Don't change the code above 👆

#Write your code below this line 👇

name1 = name1.lower()

name2 = name2.lower()

tens\_place = 0

ones\_place = 0

tens\_place=name1.count("t")+name1.count("r")+name1.count("u")+name1.count("e")+name2.count("t")+name2.count("r")+name2.count("u")+name2.count("e")

ones\_place=name1.count("l")+name1.count("o")+name1.count("v")+name1.count("e")+name2.count("l")+name2.count("o")+name2.count("v")+name2.count("e")

love\_score=str(tens\_place)+str(ones\_place)

love\_score=int(love\_score)

if love\_score<10 or love\_score>90:

print(f"Your score is {love\_score}, you go together like coke and mentos.")

elif love\_score>=40 and love\_score<=50:

print(f"Your score is {love\_score}, you are alright together.")

else:

print(f"Your score is {love\_score}")

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1. Treasure Island

print('''

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''')

print("Welcome to Treasure Island.")

print("Your mission is to find the treasure.")

#https://www.draw.io/?lightbox=1&highlight=0000ff&edit=\_blank&layers=1&nav=1&title=Treasure%20Island%20Conditional.drawio#Uhttps%3A%2F%2Fdrive.google.com%2Fuc%3Fid%3D1oDe4ehjWZipYRsVfeAx2HyB7LCQ8\_Fvi%26export%3Ddownload

#Write your code below this line 👇

direction=""

commute=""

door\_color=""

direction=input("You are at Jungle junction. Which direction do you want to take? Right or Left : \n")

if direction == "Left":

commute=input('You are in front of a lake. Enter "Wait" to cross he lake by boat or "Swim" to swim. : \n')

if commute == "Wait":

door\_color = input("You successfully crossed the dangerous lake and reached a Island. Which door do you want to open? Red, Blue or Yellow. \n")

if door\_color == "Yellow":

print("You rock 🤘 and won the game by finding the treasure 🏆!")

elif door\_color == "Blue":

print("You entered a room of 🐍. See you in hell. Game Over 😈 ")

else:

print("Opened the hell of 🔥 . Game Over 😈 ")

else:

print("You jumped into a lake full of 🐊. Nice food for 🐊 🤤. Game Over 😈")

else:

print("You take a Wrong Turn! Game Over 😈")

#############-----------------------------#############--------------------------##############

1. Who is going to pay the bill using Roulette

# Import the random module here

import random

# Split string method

names\_string = input("Give me everybody's names, separated by a comma. ")

names = names\_string.split(", ")

# 🚨 Don't change the code above 👆

#Write your code below this line 👇

payer = len(names)-1

#print(payer)

final\_payer = random.randint(0,payer)

#print(names[final\_payer])

print(f"{names[final\_payer]} is going to buy the meal today!")

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1. How to find the avg height from the given list

# 🚨 Don't change the code below 👇

student\_heights = input("Input a list of student heights ").split()

for n in range(0, len(student\_heights)):

student\_heights[n] = int(student\_heights[n])

# 🚨 Don't change the code above 👆

#Write your code below this row 👇

count = 0

total = 0

for heights in student\_heights:

total += heights

count += 1

#print (total)

avg\_height = round(total/count)

print(avg\_height)

print (sum(student\_heights))

#############-----------------------------#############--------------------------##############

1. How to find the max value from the given list

# 🚨 Don't change the code below 👇

student\_scores = input("Input a list of student scores ").split()

for n in range(0, len(student\_scores)):

student\_scores[n] = int(student\_scores[n])

print(student\_scores)

# 🚨 Don't change the code above 👆

#Write your code below this row 👇

max = 0

for score in student\_scores:

if score > max:

max = score

print(f"The highest score in the class is: {max}")

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1. Add even numbers from the list

total = 0

for num in range(1,101):

if num%2 == 0:

total += num

print(total)

#############-----------------------------#############--------------------------##############

1. Fizz buzz game, print fizz when the number from list is divisible by 3 and print buzz when it is divisible by 5 and fizzbuzz when it is divisible by both 3 and 5

for num in range(1,101):

if num%3 == 0 and num%5 ==0:

print("FizzBuzz")

elif num%3 == 0:

print("Fizz")

elif num%5 == 0:

print("Buzz")

else:

print(num)

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1. Maze Puzzle - level 3 - https://reeborg.ca/reeborg.html?lang=en&mode=python&menu=worlds%2Fmenus%2Freeborg\_intro\_en.json&name=Hurdle%204&url=worlds%2Ftutorial\_en%2Fhurdle4.json

def turn\_right():

turn\_left()

turn\_left()

turn\_left()

def jump():

move()

turn\_left()

move()

turn\_right()

move()

turn\_right()

move()

turn\_left()

def jump2():

turn\_left()

move()

turn\_right()

move()

turn\_right()

move()

turn\_left()

while at\_goal() != True:

if wall\_in\_front() == True:

jump2()

else:

move()

#less code

#while at\_goal() != True:

# jump()

# with additional code using variables

#i=True

#while i:

# jump()

# at\_goal()

# if at\_goal() == True:

# i = False

#for i in range(1,7):

# jump(i)

#############-----------------------------#############--------------------------##############

19 Maze puzzle – level 4

def turn\_right():

turn\_left()

turn\_left()

turn\_left()

def jump3():

turn\_left()

move()

while wall\_on\_right() == True:

move()

turn\_right()

move()

turn\_right()

move()

while wall\_in\_front() != True:

move()

turn\_left()

while at\_goal() != True:

if wall\_in\_front() == True:

jump3()

else:

move()

#############-----------------------------#############--------------------------##############

1. How to add a dictionary inside a list?

travel\_log = [

{

"country": "France",

"visits": 12,

"cities": ["Paris", "Lille", "Dijon"]

},

{

"country": "Germany",

"visits": 5,

"cities": ["Berlin", "Hamburg", "Stuttgart"]

},

]

def add\_new\_country(country, visits, list\_of\_cities):

travel\_log.append(

{

"country": country,

"visits": visits,

"cities": list\_of\_cities

}

)

add\_new\_country(country, visits, list\_of\_cities)

print(f"I've been to {travel\_log[2]['country']} {travel\_log[2]['visits']} times.")

The highlighted section can be re-written as follows

A screenshot of a computer code

Description automatically generated

#############-----------------------------#############--------------------------##############

1. Which line of code will print "Steak"?

order = {

"starter": {1: "Salad", 2: "Soup"},

"main": {1: ["Burger", "Fries"], 2: ["Steak"]},

"dessert": {1: ["Ice Cream"], 2: []},

}

Print(order[“main”][2][0]) // steak.

Order[“main”] 🡪 gets us {1: ["Burger", "Fries"], 2: ["Steak"]},

Order[“main”][2] 🡪 ["Steak"]

order[“main”][2][0] 🡪 Steak.

#############-----------------------------#############--------------------------##############

1. What would you predict to be the result of running the following code?

def my\_function(a):

if a < 40:

return

print("Terrible")

if a < 80:

return "Pass"

else:

return "Great"

print(my\_function(25)) //none. Because a<40 will execute where after return there is nothing. Also the line next to return will not get executed because as per python standard, any line after “return” will not be considered while a fn is defined.

#############-----------------------------#############--------------------------##############

1. What would you predict to be the result of running the following code?

def outer\_function(a, b):

def inner\_function(c, d):

return c + d

return inner\_function(a, b)

result = outer\_function(5, 10)

print(result)

Output is 15 because a = 5, which means c = 5. b = 10, which means d = 10. The output of inner\_function becomes the output of outer\_function.

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