# 1 Dictionaries

programming\_dictionary = {

    "Bug": "An error in a program that prevents the program from running as expected.",

    "Function": "A piece of code that you can easily call over and over again.",

    "Loop": "The action of doing something over and over again"}

print (programming\_dictionary["Bug"])

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# 2 creating a dictionary grades from an other dictionaty called scores

students\_scores = {

    "Harry": 81,

    "Ron" : 78,

    "Hermione": 99,

    "Neville": 62,

}

students\_grades = {}

score = 0

for student in students\_scores:

    score = students\_scores[student]

    if score >= 91 and score <= 100:

        students\_grades[student] = "Outstanding"

    elif score >= 81 and score <= 90:

        students\_grades[student] =  "Exceeds expectations"

    elif score >= 71 and score <= 80:

        students\_grades[student] =  "Acceptable"

    elif score <= 70:

        students\_grades[student] =  "Fail"

for student in students\_grades:

    print (student + " --> " + students\_grades[student])

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# 3 Nesting lists in dictionaries

travel\_log = {

    "France": ["Paris", "Lille", "Dijon", {"Cities\_visited": ["Paris", "Lille"]}],

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

}

print (travel\_log)

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#4 Nesting dictionaries in lists

travel\_log = [

    {

    "country": "France",

    "cities\_visited": ["Paris", "Lille", "Dijon1"],

    "total\_visits": 12

    },

    {

    "country": "Germany",

    "cities\_visited": ["Berlin", "Hamburg", "Heidelberg"],

    "total\_visits": 5

    }

]

def add\_new\_country (pais,ciudad,visitas):

    new\_country = {}

    new\_country["country"] = pais

    new\_country["cities\_visited:"] = ciudad

    new\_country["visits"] = visitas

    travel\_log.append(new\_country)

    print (travel\_log)

country = input ("What country do you want to add? ")

cities = input ("Type the cities separated with a espace: ")

cities = cities.split()

visits = int(input("How many times did you visit? "))

add\_new\_country (country, cities, visits)

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# The Secret Auction Program

import os

auctions = {}

other\_bid = True

bid1 = 0

bid2 = 0

bid\_winner = 0

while other\_bid == True:

    name = input ("What is your name? ")

    bid = int(input ("What's your bid? "))

    auctions[name] = bid

    more = input ("If there is not other bidder type 'not' ")

    if more == "not":

        other\_bid = False

    os.system('cls')

print (auctions)

max\_bid = (max(auctions.values()))

for key in auctions:

    if auctions[key] == max\_bid:

        bid\_winner = key

print (f"The max bid was {max\_bid}, {bid\_winner} is the winner.")

input ("Press the enter key to exit")