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HW5

B1

In [1]:

```
def main():
    isVegetarian, isVegan, isGlutenFree = getRequests()

    restaurants = getRestaurants(isVegetarian, isVegan, isGlutenFree)

    displayRestaurants(restaurants)


def getRequests():
    vegetarian = input("Is anyone in your party a Vegitarian? (Enter Y or N)")
    vegan = input("Is anyone in your party vegan? (Enter Y or N)")
    glutenFree = input("Is anyone in your party gluten-free? (Enter Y or N)")

    if vegetarian == "y" or vegetarian == "Y":
        isVege = True
    else:
        isVege = False
    if vegan == "y" or vegan == "Y":
        isVega = True
    else:
        isVega = False
    if glutenFree == "y" or glutenFree == "Y":
        isGluFree = True
    else:
        isGluFree = False

    return isVege, isVega, isGluFree


def getRestaurants(isVege, isVega, isGluFree):
    if isVege and isVega and isGluFree:
        restaurants = "Corner Café, R5"
    elif isVege:
        if isVega:
            restaurants = "Corner Café, The Chef’s Kitchen"
        elif isGluFree:
            restaurants = "Main Street Pizza Company, Corner Café, The Chef’s Kitchen"
        else:
            restaurants = "Main Street Pizza Company, Corner Café, Mama’s Fine Italian,
The Chef’s Kitchen"
    elif isVega:
        restaurants = "Corner Café, The Chef’s Kitchen"
    elif isGluFree:
        if isVega:
            restaurants = "Corner Café, The Chef’s Kitchen"
        elif isVege:
            restaurants = "Main Street Pizza Company, Corner Café, The Chef’s Kitchen"
    else:
        restaurants = "Joe’s Gourmet Burgers, Main Street Pizza Company, Corner Café, Ma
ma’s Fine Italian, The Chef’s Kitchen"
```

```
    return restaurants


def displayRestaurants(result):
    print("Here are your restaurant choices:")
    print(result)


main()
```

```
Is anyone in your party a Vegitarian? (Enter Y or N)n
Is anyone in your party vegan? (Enter Y or N)y
Is anyone in your party gluten-free? (Enter Y or N)n
Here are your restaurant choices:
Corner Café, The Chef’s Kitchen
```

B2

In [2]:

```
import turtle

# creating a Turtle
t = turtle.Turtle()
# max speed
t.speed(0)
# red fill color
t.fillcolor('red')
# pen up
t.up()
# moving to (-100,250)
t.goto(-100, 250)
# pen down
t.down()
# start filling
t.begin_fill()
# looping for 8 times
for i in range(8):
    # moving forward 200 spaces and turning right 45 degrees
    t.forward(200)
    t.right(45)
# finishing fill to complete octagon
t.end_fill()

# using white color for turtle
t.color('white')
# pen up, moving to (0,-40)
t.up()
t.goto(0, -40)
# writing a STOP label with a bigger font
t.write('STOP', align='center', font=("Arial", 80, "bold"))
# hiding turtle once done
t.ht()

# finishing off
turtle.done()
```

B3

In [3]:

```
class Question:
    def __init__(self, question, ans1, ans2, ans3, ans4, correct_ans):
        self.__ques = question
        self.__ans1 = ans1
        self.__ans2 = ans2
        self.__ans3 = ans3
        self.__ans4 = ans4
```

```
        self.__corr_ans = correct_ans

    def set_question(self, question):
        self.__ques = question
    def set_answer1(self, ans1):
        self.__ans1 = ans1
    def set_answer2(self, ans2):
        self.__ans1 = ans2
    def set_answer3(self, ans3):
        self.__ans1 = ans3
    def set_answer4(self, ans4):
        self.__ans1 = ans4
    def set_correct_answer(self, correct_ans):
        self.__corr_ans = correct_ans

    def get_question(self):
        return self.__ques
    def get_answer1(self):
        return self.__ans1
    def get_answer2(self):
        return self.__ans1
    def get_answer3(self):
        return self.__ans1
    def get_answer4(self):
        return self.__ans1
    def get_correct_answer(self):
        return self.__corr_ans


    def ask_question(self):
        print('Question: ' + self.__ques +
              '\nAnswers: ' +
              '\n1.' + self.__ans1 +
              '\n2.' + self.__ans2 +
              '\n3.' + self.__ans3 +
              '\n4.' + self.__ans4)


def play_game(question_objs):
    plyr1_correct = 0
    plyr2_correct = 0

    print("\nTrivia Quiz\n")
    for i in range(10):
        if i%2 == 0:
            print("\nPlayer 1's Turn:")
            question_objs[i].ask_question()
            choice = int(input("Enter Your Choice(1-4): "))
            if choice == question_objs[i].get_correct_answer():
                plyr1_correct += 1
        else:
            print("\nPlayer 2's Turn:")
            question_objs[i].ask_question()
            choice = int(input("Enter Your Choice(1-4): "))
            if choice == question_objs[i].get_correct_answer():
                plyr2_correct += 1
    print("Player 1's Score: ", plyr1_correct)
    print("Player 2's Score: ", plyr2_correct)
    if plyr1_correct > plyr2_correct:
        print("Player 1 Wins!")
    elif plyr2_correct > plyr1_correct:
        print("Player 2 Wins!")
    else:
        print("It's A Draw")


def main():
    question_bank = []
    answer_bank = [1,1,3,2,1,2,4,1,2,2]
    f = open('data/test.txt', 'r')
    data = f.read().split('-')
    data.pop(0)
```

```
    for i in range(10):
        li1 = data[i].split('\n')
        ques = li1[0]
        ans1 = li1[1]
        ans2 = li1[2]
        ans3 = li1[3]
        ans4 = li1[4]
        question = Question(ques, ans1, ans2, ans3, ans4, answer_bank[i])
        question_bank += [question]

    play_game(question_bank)


main()
```

```
Trivia Quiz


Player 1's Turn:
Question: Which of the following is the proper way to use a comment?
Answers:
1.Use a #
2.Use \\
3.Use *
4.Type "comment"
Enter Your Choice(1-4): 1

Player 2's Turn:
Question: Python was developed by Guido van Rossum in:
Answers:
1.1991
2.1994
3.1989
4.1999
Enter Your Choice(1-4): 1

Player 1's Turn:
Question: What does the raw_input function do?
Answers:
1.Nothing until it is cooked and no longer raw.
2.A collection of programming code that can receive values and return values.
3.Prompts the user for text input and returns what the user entered as a string.
4.Assigns a value to a variable and creates the variable, if necessary.
Enter Your Choice(1-4): 3

Player 2's Turn:
Question: The % operator in Python is used for:
Answers:
1.Get Percentage
2.Modulus
3.Division
4.Not Used
Enter Your Choice(1-4): 2

Player 1's Turn:
Question: What does a while loop do?
Answers:
1.Repeats a block of code as long as a condition is true.
2.Generates a random number within a range.
3.Causes a loop to end immediately.
4.Jumps program control to the top of a loop to test the loop condition.
Enter Your Choice(1-4): 1

Player 2's Turn:
Question: random.randrange(6) will produce a random number within the range from:
Answers:
1.(1 to 6)
2.(0 to 5)
3.(1 to 5)
4.(0 to 6)
Enter Your Choice(1-4): 2
```

```
Player 1's Turn:
Question: What does a For Loop do?
Answers:
1.Joins two strings together to form a new string.
2.Creates a copy of a continuous segment of a sequence.
3.Repeats a block of code as long as long as the condition is true.
4.Iterates over a sequence one element at a time.
Enter Your Choice(1-4): 3

Player 2's Turn:
Question: A tuple is an _________ sequence of any type.
Answers:
1.Immutable
2.Mutable
3.Repeating
4.Non Repeating
Enter Your Choice(1-4): 1

Player 1's Turn:
Question: Which of the following is NOT mutable?
Answers:
1.list
2.tuple
3.dictionary
4.all of the above
Enter Your Choice(1-4): 2

Player 2's Turn:
Question: What does a function do?
Answers:
1.Keeps independent code seperate by hiding the details.
2.Performs a task and then returns control to your program.
3.A mechanism that allows you to think about the big picture /without worrying about the
details
4.An arguement passed to a specific parameter using its parameter name,
Enter Your Choice(1-4): 2
Player 1's Score:  4
Player 2's Score:  5
Player 2 Wins!
```

In [ ]: