VaultofCodes – Week 1 Assignment

Submitted by: S.Sudarsan

**Task – 1**

**Code 1:**

**Code with error:**

number\_of\_apples = 5

print(number\_of\_apple)

**Corrected code:**

number\_of\_apples = 5

print(number\_of\_apples)

**Explanation for the error:**

In the first line of the code the variable number\_of\_apples is defined. But in the second line, inside the print function it is called by the name number\_of\_apple (the letter ‘s’ at the last is missing). Hence this program throws a NameError: number\_of\_apple is not defined. By fixing the correct variable name, the code works fine.

**Code 2:**

**Code with error:**

fruits = ["apple", "banana", "cherry"]

print(fruits[3])

**Corrected code:**

fruits = ["apple", "banana", "cherry"]

print(fruits[2])

**Explanation for the error:**

In this code a list named fruits is defined with 3 list items. Usually to access a list item we need to use the list name with appropriate item index. Indices in list starts from 0. In the second line of this code, we fetched the data at the index 3, but there exists items till index number 2. Hence it shows the IndexError: list index out of range. By fixing the index value within the range can fix the issue, or we can also able to add new items into the list to make the index value a valid one.

**Code 3:**

**Code with error:**

def find\_average(numbers):

    sum = 0

    for number in numbers:

        sum += number

    average = sum / len(numbers)

    return average

numbers = [1, 2, 3, 4, 5, "6"]

average = find\_average(numbers)

print(f"The average is: {average}")

**Corrected code:**

def find\_average(numbers):

    sum = 0

    for number in numbers:

        sum += int(number)

    average = sum / len(numbers)

    return average

numbers = [1, 2, 3, 4, 5, "6"]

average = find\_average(numbers)

print(f"The average is: {average}")

**Explanation for the error:**

The arithmetic operations such as addition, subtraction, multiplication and divisions can be performed on some data types. Here in this code we are trying to add the numbers in a list to calculate the average value. Since it is a heterogeneous list which contains integer as well as string, we can’t able to add the values directly. Hence it shows TypeError: unsupported operand type(s) for +=: 'int' and 'str'. By converting the list items into a valid integer using int() function, which returns the corresponding integer value of the parameter passed, for example int(“123”) will return 123. By adding the int() function in the code the error can be fixed.

**Code 4:**

**Code with error:**

def update\_record(records, name, score):

    if name in records:

        records[name].append(score)

    else:

        records[name] = score

student\_records = {"Alice": [88, 92], "Bob": [70, 85]}

update\_record(student\_records, "Charlie", 91)

update\_record(student\_records, "Alice", 95)

**Corrected code:**

def update\_record(records, name, score):

    if name in records:

        records[name].append(score)

    else:

        records[name] = [score]

student\_records = {"Alice": [88, 92], "Bob": [70, 85]}

update\_record(student\_records, "Charlie", 91)

update\_record(student\_records, "Alice", 95)

**Explanation for the error:**

The function defined in this code is used to update a student’s record with the score. But if the student is not present in the student\_records, we need to add the student in the student\_records. Here in this code the score is added as integer data type if the student is not present in the record. If we try to update the record of the student once again, it will show AttributeError: 'int' object has no attribute 'append'. By adding [ ] brackets around the score variable the error can be fixed.