

**ANL252**

**Python for Data Analytics**

**Tutor-Marked Assignment**

**July 2023 Presentation**

**Submitted by:**

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**Question 1(a)**

Plagiarism in coding can happen due to these reasons :

* Lack of knowledge and skill.
* Disregard personal and academic integrity.
* Pressed for time in submitting assignments.
* Ill- disciplined in managing academic matters.
* Easy access to AI tools and freelancing portals offering help with a small fee.
* There may be ways to get around being detected by Turnitin or other checks.
* Large online coding community, presenting opportunities for similar work copying.
* Coding or programming can be challenging and time consuming.

Plagiarism can be avoided by:

* At the start of coding course, instructor can reiterate the importance and integrity of producing each own coding works.
* Work in a cleanroom to eliminate the chance of copying and duly cite work when taken from outside sources (Bailey, 2017).
* Include comments and use markdown text to highlight original work and for clarity and reference.
* Use unique names when working with variables (Bailey, 2017). Learn and practise coding diligently to have a solid foundation.
* Collaborate with the intent to strengthen participants’ skills and commit ethically to only produce original work.

(174 words)

Question 1(b)

most\_favourite\_asian\_country = "Japan"

second\_favourite\_asian\_country = "Korea"

third\_favourite\_asian\_country = "Taiwan"

user\_choice = input("Which Asian country would you like to visit? ")

if user\_choice == "Japan":

print("Your selection is the most favourite choice, Good choice!")

elif user\_choice == "Korea":

print("Your selection is the second favourite choice, Good choice!")

elif user\_choice == "Taiwan":

print ("Your selection is the third favourite choice, Good choice!")

else:

print ("Sorry, we don't have information about that country.")

top\_asian\_countries\_list = ["Japan","Korea","Taiwan"]

third\_favourite = top\_asian\_countries\_list[2]

print (third\_favourite)

top\_asian\_countries\_list.extend(["China","Vietnam","Malaysia"])

print(top\_asian\_countries\_list)

top\_asian\_countries\_list.insert(2,"Singapore")

print(top\_asian\_countries\_list)

The code above aims to allow user to input his/her choice of country to visit. If their choices happen to be one of the top three choices Asian countries, a string or sentence is printed out to inform if it is the top, second or third most favourite country.

The code uses if, elif, and else function to call out and print sentences stating the rank of the country.

Next, a Python list is created to include three countries – Japan, Korea and Taiwan. And using variables and indexes, I can print out the country accordingly to the sequence.

New countries is extended by adding a list to the existing list (Shaw, 2017).

(194 words)

1(c)

# Set up three favourite Asian countries using unique variables  
most\_favourite\_asian\_country = "Japan"

\_2nd\_favourite\_asian\_country = "Korea"

\_3rd\_favourite\_asian\_country = "Taiwan"

# Create input to ask for user’s response   
user\_choice = input("Which Asian country would you like to visit? ")

if user\_choice == "Japan":

print("Your selection is the most favourite choice, Good choice!")

elif user\_choice == "Korea":

print("Your selection is the 2nd favourite choice, Good choice!")

elif user\_choice == "Taiwan":

print ("Your selection is the 3rd favourite choice, Good choice!")

else:

print ("Sorry, we don't have information about that country.")

**Output:**

**Which country would you like to visit? Korea**

**Your selection is the 2nd favourite choice, Good choice!**

# Create a list of top Asian countries  
top\_asian\_countries\_list = ["Japan","Korea","Taiwan"]

\_3rd\_favourite = top\_asian\_countries\_list[2]

print (\_3rd\_favourite)

**Output:   
Taiwan**

# Add new countries to the list and print updated list  
top\_asian\_countries\_list.extend(["China","Vietnam","Malaysia"])

print(top\_asian\_countries\_list)

**Output:   
['Japan', 'Korea', 'Taiwan', 'China', 'Vietnam', 'Malaysia']**

# Insert Singapore as the 3rd favourite country and print updated list  
top\_asian\_countries\_list.insert(2,"Singapore")

print(top\_asian\_countries\_list)

**Output:['Japan', 'Korea', 'Singapore', 'Taiwan', 'China', 'Vietnam', 'Malaysia']**

The purpose of rewriting code:

1. To achieve higher readability with proper and consistent indentation of spaces.
2. Use of Ordinal numbers (2nd and 3rd) instead of words which look neater and shorter compared to words.
3. Use of comments to provide clarity and references so that revisits to work on the code again is easier.

(221 words)

Question 2

These are the proposals for a better quality code and user experience:

The ‘break’ statement has prevented the respondent to try a new input when a product that is not listed is typed into the box. A ‘continue’ statement should be used to bring back the question again.

if item not in products:

print(f'Wrong product! Please try again.')

**continue**

The ‘break’ can appear at the end of the code in order to stop the Hello! What do you want to buy? from appearing again.

print(f'This is our updated shopping list: {updated\_items}')

**break**

To improve the return of output when asking the price of an item, we can rewrite the code:

price\_of\_item = **float**(input("How much is it (in SGD)?"))

Next, comments can be added to explain the code for better understanding and for any future editing or for new users.

**#get product items**  
item = str(input("Hello! What do you want to buy?"))

**#get price of product**  
price\_of\_item = float(input("How much is it (in SGD)?"))

Lastly, to improve readability, **indentation should be consistent** and the variable name of ‘query’ can be changed to a more accurate and concise word ‘**response**’.

(189 words)

References:

Bailey, J. (2017). *Plagiarism and Programming: How to Code Without Plagiarizing*.Turnitin.

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OpenAI. (2023). ChatGPT (August 3 version) [Large language model].

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Shaw, Z. A. (2017). Learn Python 3 the Hard Way. Pearson Technology Group.

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**Application of Chat GPT**

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| **Name of AI Tool** | **Prompt Used** | **The Full Output** | **Output Adapted** |
| Chat GPT | What is wrong with the following Python code: most\_favourite\_asian\_country = "Japan" second\_favourite\_asian\_country = "Korea" third\_favourite\_asian\_country = "Taiwan"  if user choice == "Japan": print("Your selection is the most favourite choice of many people, Good choice!")  elif user choice == "Korea": print("Your selection is the second favourite choice, Good choice!")  elif user choice == "Taiwan": print("Your selection is the second favourite choice, Good choice!")  user\_choice = input("Which country would you like to visit? ") | The issue in your code is that you're trying to compare the user's choice (user\_choice) with country names before you've actually obtained the user's input. To fix this, you should move the user\_choice assignment statement (user\_choice = input("Which country would you like to visit? ")) to the top, before the if-elif-else statements.  Here's the corrected code:  most\_favourite\_asian\_country = "Japan"  second\_favourite\_asian\_country = "Korea"  third\_favourite\_asian\_country = "Taiwan"  user\_choice = input("Which country would you like to visit? ")  if user\_choice == "Japan":  print("Your selection is the most favorite choice of many people. Good choice!")  elif user\_choice == "Korea":  print("Your selection is the second favorite choice. Good choice!")  elif user\_choice == "Taiwan":  print("Your selection is the third favorite choice. Good choice!")  else:  print("Sorry, we don't have information about that country.")  In this corrected code, we first ask the user for their choice and store it in the user\_choice variable before using it in the if-elif-else statements. This should allow the code to work as intended and provide the correct output based on the user's input. | 1) Adding  else:  print("Sorry, we don't have information about that country.")  2) Placing input of user choice immediately after the three variables instead of right at the bottom of code. |