

CHAPTER-01: PRACTICE

```
print("Hello World!!!")
```

CHAPTER-02: VARIABLES

```
## EXP:01 ##  
message = "Hello Python World!!"  
print(message)  
message = "Hello Python Crash Course World!!"  
print(message)
```

```
## EXP:02 ##  
message = "Hello Python Crash Course reader"  
print(mesage)
```

```
## EXP:03 ##  
mesage = "Hello Python Crash COurse reader"  
print(mesage)
```

STRINGS

```
## EXP:01 ##  
name = "ada lovelace"  
print(name.title())
```

```
## EXP:02 ##  
name = "Ada LoveLace"  
print(name.upper())  
print(name.lower())
```

```
## EXP:03 ##  
  
first_name = "ada"  
last_name = "lovelace"  
full_name = first_name + " " + last_name  
print(full_name)
```

```
## EXP:04 ##  
  
first_name = "ada"  
last_name = "lovelace"  
full_name = first_name + " " + last_name  
print("Hello, " + full_name.title() + "!")
```

```
## EXP:05 ##  
  
first_name = "ada"  
last_name = "lovelace"  
full_name = first_name + " " + last_name  
message = "Hello, " + full_name.title() + "!"  
print(message)
```

```
## EXP:06 ##  
  
print("\tPython")
```

```
## EXP:07 ##  
  
print("Languages:\nPython\nC\nJavaScript")
```

```
## EXP:08 ##  
  
print("Languages:\n\tPython\n\tC\n\tJavaScript")
```

```
## EXP:09 ##  
  
favourite_language = "Python "  
print(favourite_language)  
print(favourite_language.rstrip())  
print(favourite_language)
```

```
## EXP:10 ##  
  
message = "One of Python's strengths is its diverse community."  
print(message)
```

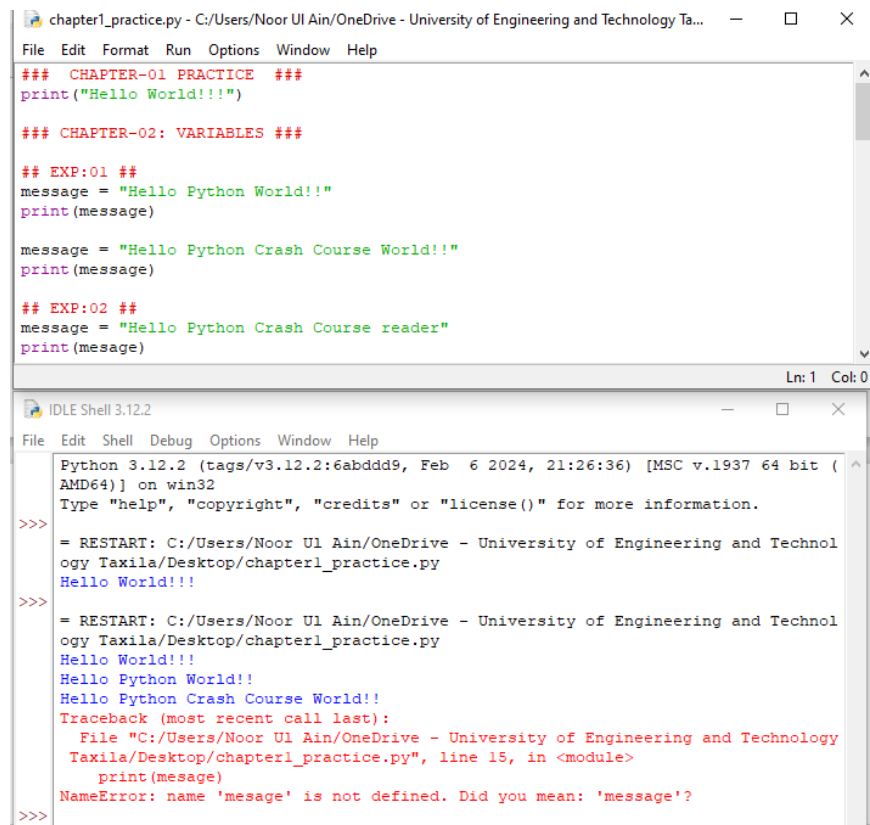
NUMBERS

```
## EXP:1 ##  
  
print (3+4)  
print(8-3)  
print(2*3)  
print(9/3)  
print(2*(3+4))  
print(2 * 0.1)  
print(2.5 + 3.8)
```

```
## EXP:2 ##  
  
age = 23  
message = "Happy " + age + "rd Birthday!!"  
print(message)
```

```
## EXP:3 (Solution of exp-2) ##  
  
age = 23  
  
message = "Happy " + str(age) + "rd Birthday!!"  
  
print(message)
```

IMPLEMENTATION



The screenshot displays the Python IDLE environment. The top window, titled 'chapter1_practice.py', contains the following code:

```
### CHAPTER-01 PRACTICE ###  
print("Hello World!!!")  
  
### CHAPTER-02: VARIABLES ###  
  
## EXP:01 ##  
message = "Hello Python World!!"  
print(message)  
  
message = "Hello Python Crash Course World!!"  
print(message)  
  
## EXP:02 ##  
message = "Hello Python Crash Course reader"  
print(mesage)
```

The bottom window, titled 'IDLE Shell 3.12.2', shows the execution output:

```
Python 3.12.2 (tags/v3.12.2:6abddd9, Feb 6 2024, 21:26:36) [MSC v.1937 64 bit (AMD64)] on win32  
Type "help", "copyright", "credits" or "license()" for more information.  
>>> = RESTART: C:/Users/Noor Ul Ain/OneDrive - University of Engineering and Technology Taxila/Desktop/chapter1_practice.py  
Hello World!!!  
>>> = RESTART: C:/Users/Noor Ul Ain/OneDrive - University of Engineering and Technology Taxila/Desktop/chapter1_practice.py  
Hello World!!!  
Hello Python World!!  
Hello Python Crash Course World!!  
Traceback (most recent call last):  
  File "C:/Users/Noor Ul Ain/OneDrive - University of Engineering and Technology Taxila/Desktop/chapter1_practice.py", line 15, in <module>  
    print(mesage)  
NameError: name 'mesage' is not defined. Did you mean: 'message'?
```

The error message indicates a typo in the variable name 'mesage' on line 15, which should be 'message'.

```
chapter1_practice.py - C:/Users/Noor Ul Ain/OneDrive - University of Engineering and Technology Ta...
File Edit Format Run Options Window Help

### STRINGS ###

## EXP:01 ##
name = "ada lovelace"
print(name.title())

## EXP:02 ##
name = "Ada Lovelace"
print(name.upper())
print(name.lower())

## EXP:03 ##
first_name = "ada"
last_name = "lovelace"
full_name = first_name + " " + last_name
print(full_name)

## EXP:04 ##
first_name = "ada"
last_name = "lovelace"
full_name = first_name + " " + last_name
print("Hello, " + full_name.title() + "!")

## EXP:05 ##
first_name = "ada"
last_name = "lovelace"
full_name = first_name + " " + last_name
message = "Hello, " + full_name.title() + "!"
print(message)

Ln: 29 Col: 19
```

OUTPUT

```
IDLE Shell 3.12.2
File Edit Shell Debug Options Window Help

    print(message)
NameError: name 'message' is not defined. Did you mean: 'message'?
>>>
= RESTART: C:/Users/Noor Ul Ain/OneDrive - University of Engineering and Technology Taxila/Desktop/chapter1_practice.py
Ada Lovelace
ADA LOVELACE
ada lovelace
ada lovelace
Hello, Ada Lovelace!
Traceback (most recent call last):
  File "C:/Users/Noor Ul Ain/OneDrive - University of Engineering and Technology Taxila/Desktop/chapter1_practice.py", line 33, in <module>
    print(message)
NameError: name 'message' is not defined. Did you mean: 'message'?
>>>

Ln: 23 Col: 125
```

```
chapter1_practice.py - C:/Users/Noor UI Ain/OneDrive - University of Engineering and Technology Ta...
File Edit Format Run Options Window Help

## EXP:06 ##
print("\tPython")

## EXP:07 ##
print("Languages:\nPython\nC\nJavaScript")

## EXP:08 ##
print("Languages:\n\tPython\n\tC\n\tJavaScript")

## EXP:09 ##
favourite_language = "Python "
print(favourite_language)
print(favourite_language.rstrip())
print(favourite_language)

## EXP:10 ##
message = "One of Python's strengths is its diverse community."
print(message)

### NUMBERS ###

## EXP:1 ##
print (3+4)
print (8-3)
print (2*3)
print (9/3)
print (2*(3+4))

print (2 * 0.1)
print (2.5 + 3.8)

## EXP:2 ##
age = 23
message = "Happy " + age + "rd Birthday!!"
print(message)
```

OUTPUT

```
IDLE Shell 3.12.2
File Edit Shell Debug Options Window Help

= RESTART: C:/Users/Noor UI Ain/OneDrive - University of Engineering and Technol
ogy Taxila/Desktop/chapter1_practice.py
Python
Languages:
Python
C
JavaScript
Languages:
Python
C
JavaScript
Python
Python
Python
One of Python's strengths is its diverse community.
7
5
4
3.0
14
0.2
6.3
Traceback (most recent call last):
  File "C:/Users/Noor UI Ain/OneDrive - University of Engineering and Technology
Taxila/Desktop/chapter1_practice.py", line 91, in <module>
    message = "Happy " + age + "rd Birthday!!"
    message = "Happy " + age + "rd Birthday!!"
TypeError: can only concatenate str (not "int") to str

...

## EXP:3 (Solution of exp-2) ##
age = 23
message = "Happy " + str(age) + "rd Birthday!!"
print(message)

>>>
= RESTART: C:/Users/Noor UI Ain/OneDrive - University of Engineering and Technol
ogy Taxila/Desktop/chapter1_practice.py
Happy 23rd Birthday!!
>>>
```

CHAPTER-03: LISTS

```
## EXP-01 ##  
  
bicycles = ['trek','cannondale','redline','specialized']  
  
print(bicycles)
```

```
## EXP-02:Accessing elements of a list ##  
  
bicycles = ['trek','cannondale','redline','specialized']  
  
print(bicycles[0])
```

```
## EXP-03 ##  
  
bicycles = ['trek', 'cannondale', 'redline', 'specialized']  
  
print(bicycles[0].title())
```

```
## EXP-04 ##  
  
bicycles = ['trek', 'cannondale', 'redline', 'specialized']  
  
print(bicycles[1])  
  
print(bicycles[3])
```

```
## EXP-05 ##  
  
bicycles = ['trek', 'cannondale', 'redline', 'specialized']  
  
print(bicycles[-1])
```

```
## EXP-06 ##  
  
bicycles = ['trek', 'cannondale', 'redline', 'specialized']  
  
message = "My first bicycle was a " + bicycles[0].title() + ". "  
  
print(message)
```

```
## EXP-07: Adding elements to a list ##  
motorcycles = ['honda', 'yamaha', 'suzuki']  
print(motorcycles)  
  
motorcycles[0] = 'ducati'  
print(motorcycles)
```

```
## EXP-08 ##  
motorcycles = ['honda', 'yamaha', 'suzuki']  
print(motorcycles)  
  
motorcycles.append('ducati')  
print(motorcycles)
```

```
## EXP-09 ##  
motorcycles = []  
motorcycles.append('honda')  
motorcycles.append('yamaha')  
motorcycles.append('suzuki')  
print(motorcycles)
```

```
## EXP-10: Inserting elements into list ##  
motorcycles = ['honda', 'yamaha', 'suzuki']  
motorcycles.insert(0, 'ducati')  
print(motorcycles)
```



```
## EXP-11: Removing elements from list ##
```

```
motorcycles = ['honda', 'yamaha', 'suzuki']
```

```
print(motorcycles)
```

```
del motorcycles[0]
```

```
print(motorcycles)
```

```
## EXP-12: Removing elements from list using POP method ##
```

```
motorcycles = ['honda', 'yamaha', 'suzuki']
```

```
print(motorcycles)
```

```
popped_motorcycle = motorcycles.pop()
```

```
print(motorcycles)
```

```
## EXP-13 ##
```

```
motorcycles = ['honda', 'yamaha', 'suzuki']
```

```
last_owned = motorcycles.pop()
```

```
print("The last motorcycle I owned was a " + last_owned.title() + ".")
```

```
## EXP-14 ##
```

```
motorcycles = ['honda', 'yamaha', 'suzuki', 'ducati']
```

```
print(motorcycles)
```

```
motorcycles.remove('ducati')
```

```
print(motorcycles)
```

```
## EXP-15 ##  
motorcycles = ['honda', 'yamaha', 'suzuki', 'ducati']  
print(motorcycles)  
too_expensive = 'ducati'  
motorcycles.remove(too_expensive)  
print(motorcycles)  
print("\nA " + too_expensive.title() + " is too expensive for me.")
```

```
## EXP-16: Sorting a List ##  
cars = ['bmw', 'audi', 'toyota', 'subaru']  
cars.sort()  
print(cars)
```

```
## EXP-17: Sorting in reverse order ##  
cars = ['bmw', 'audi', 'toyota', 'subaru']  
cars.sort(reverse=True)  
print(cars)
```

```
## EXP-18 ##  
cars = ['bmw', 'audi', 'toyota', 'subaru']  
print("Here is the original list:")  
print(cars)  
print("\nHere is the sorted list:")  
print(sorted(cars))  
print("\nHere is the original list again:")  
print(cars)
```

EXP-19: Reversing a List

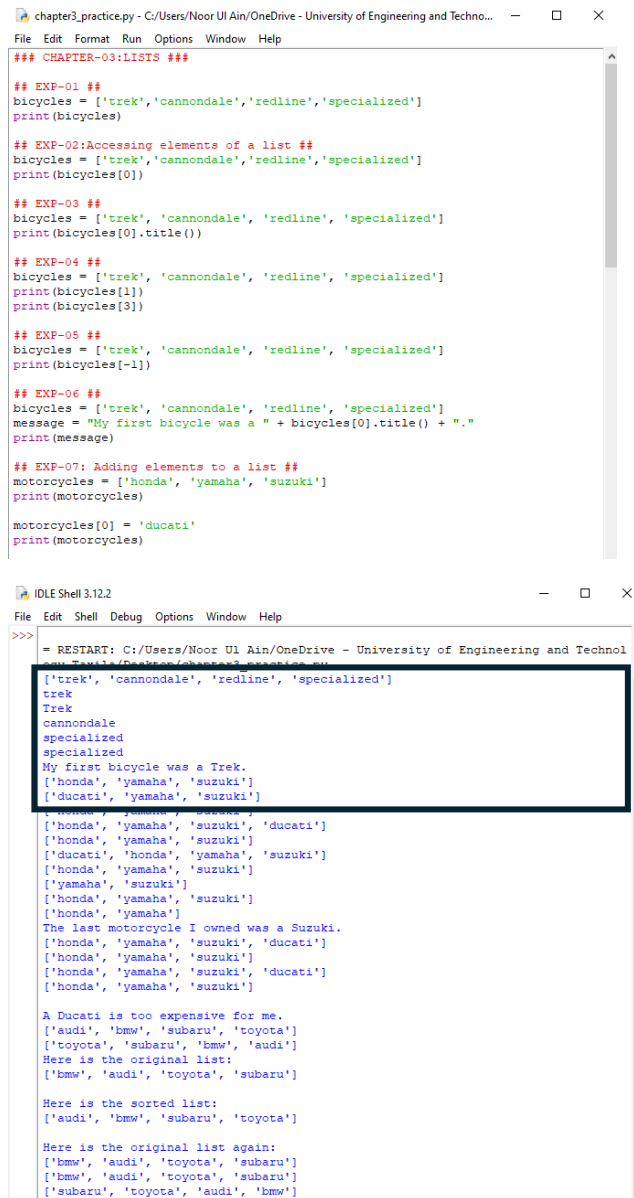
```
cars = ['bmw', 'audi', 'toyota', 'subaru']
```

```
print(cars)
```

```
cars.reverse()
```

```
print(cars)
```

IMPLEMENTATION



```
chapter3_practice.py - C:/Users/Noor UI Ain/OneDrive - University of Engineering and Techno...
File Edit Format Run Options Window Help

### CHAPTER-03:LISTS ###

## EXP-01 ##
bicycles = ['trek', 'cannondale', 'redline', 'specialized']
print(bicycles)

## EXP-02: Accessing elements of a list ##
bicycles = ['trek', 'cannondale', 'redline', 'specialized']
print(bicycles[0])

## EXP-03 ##
bicycles = ['trek', 'cannondale', 'redline', 'specialized']
print(bicycles[0].title())

## EXP-04 ##
bicycles = ['trek', 'cannondale', 'redline', 'specialized']
print(bicycles[1])
print(bicycles[3])

## EXP-05 ##
bicycles = ['trek', 'cannondale', 'redline', 'specialized']
print(bicycles[-1])

## EXP-06 ##
bicycles = ['trek', 'cannondale', 'redline', 'specialized']
message = "My first bicycle was a " + bicycles[0].title() + "."
print(message)

## EXP-07: Adding elements to a list ##
motorcycles = ['honda', 'yamaha', 'suzuki']
print(motorcycles)

motorcycles[0] = 'ducati'
print(motorcycles)
```

```
IDLE Shell 3.12.2
File Edit Shell Debug Options Window Help

>>>
= RESTART: C:/Users/Noor UI Ain/OneDrive - University of Engineering and Techno...
>>> ['trek', 'cannondale', 'redline', 'specialized']
trek
Trek
cannondale
specialized
specialized
My first bicycle was a Trek.
['honda', 'yamaha', 'suzuki']
['ducati', 'yamaha', 'suzuki']

['honda', 'yamaha', 'suzuki', 'ducati']
['honda', 'yamaha', 'suzuki']
['ducati', 'honda', 'yamaha', 'suzuki']
['honda', 'yamaha', 'suzuki']
['yamaha', 'suzuki']
['honda', 'yamaha', 'suzuki']
['honda', 'yamaha']
The last motorcycle I owned was a Suzuki.
['honda', 'yamaha', 'suzuki', 'ducati']
['honda', 'yamaha', 'suzuki']
['honda', 'yamaha', 'suzuki', 'ducati']
['honda', 'yamaha', 'suzuki']

A Ducati is too expensive for me.
['audi', 'bmw', 'subaru', 'toyota']
['toyota', 'subaru', 'bmw', 'audi']
Here is the original list:
['bmw', 'audi', 'toyota', 'subaru']

Here is the sorted list:
['audi', 'bmw', 'subaru', 'toyota']

Here is the original list again:
['bmw', 'audi', 'toyota', 'subaru']
['bmw', 'audi', 'toyota', 'subaru']
['subaru', 'toyota', 'audi', 'bmw']
```

```
chapter3_practice.py - C:/Users/Noor UI Ain/OneDrive - University of Engineering and Techno...
File Edit Format Run Options Window Help

## EXP-08 ##
motorcycles = ['honda', 'yamaha', 'suzuki']
print(motorcycles)

motorcycles.append('ducati')
print(motorcycles)

## EXP-09 ##
motorcycles = []
motorcycles.append('honda')
motorcycles.append('yamaha')
motorcycles.append('suzuki')
print(motorcycles)

## EXP-10: Inserting elements into list ##
motorcycles = ['honda', 'yamaha', 'suzuki']
motorcycles.insert(0, 'ducati')
print(motorcycles)

## EXP-11: Removing elements from list ##
motorcycles = ['honda', 'yamaha', 'suzuki']
print(motorcycles)
del motorcycles[0]
print(motorcycles)

## EXP-11: Removing elements from list using POP method ##
motorcycles = ['honda', 'yamaha', 'suzuki']
print(motorcycles)
popped_motorcycle = motorcycles.pop()
print(motorcycles)

## EXP-12 ##
motorcycles = ['honda', 'yamaha', 'suzuki']
last_owned = motorcycles.pop()
print("The last motorcycle I owned was a " + last_owned.title() + ".")
```

```
IDLE Shell 3.12.2
File Edit Shell Debug Options Window Help
>>>
= RESTART: C:/Users/Noor UI Ain/OneDrive - University of Engineering and Techno...
ogy Taxila/Desktop/chapter3_practice.py
['trek', 'cannondale', 'redline', 'specialized']
trek
Trek
cannondale
cannondale
specialized
specialized
My first bicycle was a Trek.
['honda', 'yamaha', 'suzuki']
['ducati', 'yamaha', 'suzuki']
['honda', 'yamaha', 'suzuki']
['honda', 'yamaha', 'suzuki', 'ducati']
['honda', 'yamaha', 'suzuki']
['ducati', 'honda', 'yamaha', 'suzuki']
['honda', 'yamaha', 'suzuki']
['yamaha', 'suzuki']
['honda', 'yamaha', 'suzuki']
['honda', 'yamaha']
The last motorcycle I owned was a Suzuki.
['honda', 'yamaha', 'suzuki', 'ducati']
['honda', 'yamaha', 'suzuki']
['honda', 'yamaha', 'suzuki', 'ducati']
['honda', 'yamaha', 'suzuki']

A Ducati is too expensive for me.
['audi', 'bmw', 'subaru', 'toyota']
['toyota', 'subaru', 'bmw', 'audi']
Here is the original list:
['bmw', 'audi', 'toyota', 'subaru']

Here is the sorted list:
['audi', 'bmw', 'subaru', 'toyota']

Here is the original list again:
['bmw', 'audi', 'toyota', 'subaru']
['bmw', 'audi', 'toyota', 'subaru']
['subaru', 'toyota', 'audi', 'bmw']
```

```
chapter3_practice.py - C:/Users/Noor Ul Ain/OneDrive - University of Engineering and Techno...
File Edit Format Run Options Window Help

## EXP-14 ##
motorcycles = ['honda', 'yamaha', 'suzuki', 'ducati']
print(motorcycles)
too_expensive = 'ducati'
motorcycles.remove(too_expensive)
print(motorcycles)
print("\nA " + too_expensive.title() + " is too expensive for me.")

## EXP-15: Sorting a List ##
cars = ['bmw', 'audi', 'toyota', 'subaru']
cars.sort()
print(cars)

## EXP-16: Sorting in reverse order ##
cars = ['bmw', 'audi', 'toyota', 'subaru']
cars.sort(reverse=True)
print(cars)

## EXP-17 ##
cars = ['bmw', 'audi', 'toyota', 'subaru']
print("Here is the original list:")
print(cars)
print("\nHere is the sorted list:")
print(sorted(cars))
print("\nHere is the original list again:")
print(cars)

## EXP-18: Reversing a List ##
cars = ['bmw', 'audi', 'toyota', 'subaru']
print(cars)
cars.reverse()
print(cars)

## EXP-19 ##
cars = ['bmw', 'audi', 'toyota', 'subaru']
len(cars)
```

```
IDLE Shell 3.12.2
File Edit Shell Debug Options Window Help

>>>
= RESTART: C:/Users/Noor Ul Ain/OneDrive - University of Engineering and Technol
ogy Taxila/Desktop/chapter3_practice.py
['trek', 'cannondale', 'redline', 'specialized']
trek
Trek
cannondale
specialized
specialized
My first bicycle was a Trek.
['honda', 'yamaha', 'suzuki']
['ducati', 'yamaha', 'suzuki']
['honda', 'yamaha', 'suzuki']
['honda', 'yamaha', 'suzuki', 'ducati']
['honda', 'yamaha', 'suzuki']
['ducati', 'honda', 'yamaha', 'suzuki']
['honda', 'yamaha', 'suzuki']
['yamaha', 'suzuki']
['honda', 'yamaha', 'suzuki']
['honda', 'yamaha']
The last motorcycle I owned was a Suzuki.
['honda', 'yamaha', 'suzuki', 'ducati']
['honda', 'yamaha', 'suzuki']
['honda', 'yamaha', 'suzuki', 'ducati']
['honda', 'yamaha', 'suzuki']

A Ducati is too expensive for me.
['audi', 'bmw', 'subaru', 'toyota']
['toyota', 'subaru', 'bmw', 'audi']
Here is the original list:
['bmw', 'audi', 'toyota', 'subaru']

Here is the sorted list:
['audi', 'bmw', 'subaru', 'toyota']

Here is the original list again:
['bmw', 'audi', 'toyota', 'subaru']
['bmw', 'audi', 'toyota', 'subaru']
['subaru', 'toyota', 'audi', 'bmw']
```

CHAPTER-04: WORKING WITH LISTS

```
## EXP-01 ##
```

```
magicians = ['alice', 'david', 'carolina']
```

```
for magician in magicians:
```

```
    print(magician)
```

```
## EXP-02 ##
```

```
magicians = ['alice', 'david', 'carolina']
```

```
for magician in magicians:
```

```
    print(magician.title() + ", that was a great trick!")
```

```
    print("I can't wait to see your next trick, " + magician.title() + ".\n")
```

```
print("Thank you, everyone. That was a great magic show!")
```

```
## EXP-03: Making Numerical Lists ##
```

```
for value in range(1,5):
```

```
    print(value)
```

```
## EXP-04 ##
```

```
numbers = list(range(1,6))
```

```
print(numbers)
```

```
## EXP-05 ##
```

```
even_numbers = list(range(2,11,2))
```

```
print(even_numbers)
```

```
## EXP-06 ##  
  
squares = []  
for value in range(1,11):  
    square = value**2  
squares.append(square)  
print(squares)
```

```
## EXP-07: List Comprehension##  
  
squares = [value**2 for value in range(1,11)]  
print(squares)
```

```
## EXP-08: Slicing a List ##  
  
players = ['charles', 'martina', 'michael', 'florence', 'eli']  
print(players[1:4])  
print(players[0:3])  
print(players[:4])  
print(players[2:])  
print(players[-3:])
```

```
## EXP-09: Looping through slice ##  
  
players = ['charles', 'martina', 'michael', 'florence', 'eli']  
print("Here are the first three players on my team:")  
for player in players[:3]:  
    print(player.title())
```

```
## EXP-10: Tuple ##
```

```
dimensions = (200, 50)
```

```
print(dimensions[0])
```

```
print(dimensions[1])
```

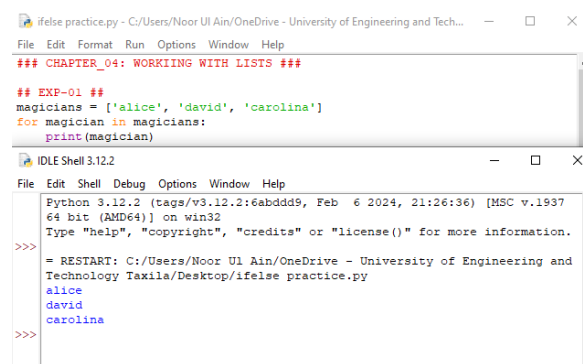
```
## EXP-11 ##
```

```
dimensions = (200, 50)
```

```
for dimension in dimensions:
```

```
    print(dimension)
```

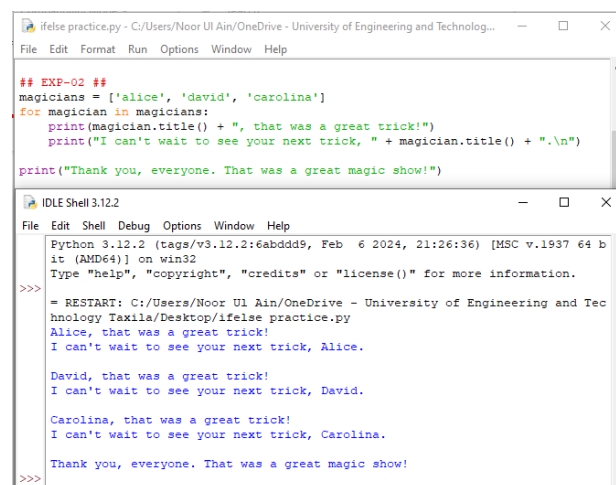
IMPLEMENTATION



```
ifelse practice.py - C:/Users/Noor UI Ain/OneDrive - University of Engineering and Tech...
File Edit Format Run Options Window Help
### CHAPTER_04: WORKING WITH LISTS ###

## EXP-01 ##
magicians = ['alice', 'david', 'carolina']
for magician in magicians:
    print(magician)

IDLE Shell 3.12.2
File Edit Shell Debug Options Window Help
Python 3.12.2 (tags/v3.12.2:6abddd9, Feb 6 2024, 21:26:36) [MSC v.1937 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/Noor UI Ain/OneDrive - University of Engineering and Technology Taxila/Desktop/ifelse practice.py
alice
david
carolina
>>>
```



```
ifelse practice.py - C:/Users/Noor UI Ain/OneDrive - University of Engineering and Technolog...
File Edit Format Run Options Window Help

## EXP-02 ##
magicians = ['alice', 'david', 'carolina']
for magician in magicians:
    print(magician.title() + ", that was a great trick!")
    print("I can't wait to see your next trick, " + magician.title() + ".\n")
print("Thank you, everyone. That was a great magic show!")

IDLE Shell 3.12.2
File Edit Shell Debug Options Window Help
Python 3.12.2 (tags/v3.12.2:6abddd9, Feb 6 2024, 21:26:36) [MSC v.1937 64 b
it (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/Noor UI Ain/OneDrive - University of Engineering and Tec
hnology Taxila/Desktop/ifelse practice.py
Alice, that was a great trick!
I can't wait to see your next trick, Alice.

David, that was a great trick!
I can't wait to see your next trick, David.

Carolina, that was a great trick!
I can't wait to see your next trick, Carolina.

Thank you, everyone. That was a great magic show!
>>>
```



```
ifelse practice.py - C:/Users/Noor UI Ain/OneDrive - University of Engineering and Technolog...
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## EXP-03: Making Numerical Lists ##
for value in range(1,5):
    print(value)

## EXP-04 ##
numbers = list(range(1,6))
print(numbers)

## EXP-05 ##
even_numbers = list(range(2,11,2))
print(even_numbers)

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Python 3.12.2 (tags/v3.12.2:6abddd9, Feb 6 2024, 21:26:36) [MSC v.1937 64 b
it (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/Noor UI Ain/OneDrive - University of Engineering and Tec
hnology Taxila/Desktop/ifelse practice.py
1
2
3
4
[1, 2, 3, 4, 5]
[2, 4, 6, 8, 10]
>>>
```

```
ifelse practice.py - C:/Users/Noor UI Ain/OneDrive - University of Engineering and Technolog...
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## EXP-06 ##
squares = []
for value in range(1,11):
    square = value**2
    squares.append(square)
print(squares)

## EXP-07: List Comprehension##
squares = [value**2 for value in range(1,11)]
print(squares)

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Python 3.12.2 (tags/v3.12.2:6abddd9, Feb 6 2024, 21:26:36) [MSC v.1937 64 b
it (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/Noor UI Ain/OneDrive - University of Engineering and Tec
hnology Taxila/Desktop/ifelse practice.py
[100]
[1, 4, 9, 16, 25, 36, 49, 64, 81, 100]
>>>
```

```
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'''
## EXP-08: Slicing a List ##
players = ['charles', 'martina', 'michael', 'florence', 'eli']
print(players[1:4])
print(players[0:3])
print(players[:4])
print(players[2:])
print(players[-3:])

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Python 3.12.2 (tags/v3.12.2:6abddd9, Feb 6 2024, 21:26:36) [MSC v.1937 64 b
it (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/Noor UI Ain/OneDrive - University of Engineering and Tec
hnology Taxila/Desktop/ifelse practice.py
['martina', 'michael', 'florence']
['charles', 'martina', 'michael']
['charles', 'martina', 'michael', 'florence']
['michael', 'florence', 'eli']
['michael', 'florence', 'eli']
>>>
```

```
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...

## EXP-09: Looping through slice ##
players = ['charles', 'martina', 'michael', 'florence', 'eli']
print("Here are the first three players on my team:")
for player in players[:3]:
    print(player.title())

## EXP-10: Tuple ##
dimensions = (200, 50)
print(dimensions[0])
print(dimensions[1])

## EXP-11 ##
dimensions = (200, 50)
for dimension in dimensions:
    print(dimension)

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Python 3.12.2 (tags/v3.12.2:6abddd9, Feb  6 2024, 21:26:36) [MSC v.1937 64 b
it (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/Noor UI Ain/OneDrive - University of Engineering and Tec
hnology Taxila/Desktop/ifelse practice.py
Here are the first three players on my team:
Charles
Martina
Michael
200
50
200
50
>>>
```

CHAPTER-05: IF STATEMENTS

```
## EXP-01 ##

cars = ['audi', 'bmw', 'subaru', 'toyota']

for car in cars:
    if car == 'bmw':
        print(car.upper())
    else:
        print(car.title())
```

```
## EXP-02 ##

car = 'Audi'

car == 'audi'
```

```
## EXP-03 ##

requested_topping = 'mushrooms'

if requested_topping != 'anchovies':
    print("Hold the anchovies!")
```

```
## EXP-04 ##

answer = 17

if answer != 42:
    print("That is not the correct answer. Please try again!")
```

```
## EXP-05 ##

requested_toppings = ['mushrooms', 'onions', 'pineapple']

'mushrooms' in requested_toppings

'pepperoni' in requested_toppings
```

```
## EXP-06 ##  
  
banned_users = ['andrew', 'carolina', 'david']  
  
user = 'marie'  
  
if user not in banned_users:  
    print(user.title() + ", you can post a response if you wish.")
```

```
## EXP-07 ##  
  
age = 19  
  
if age >= 18:  
    print("You are old enough to vote!")
```

```
## EXP-08 ##  
  
age = 17  
  
if age >= 18:  
    print("You are old enough to vote!")  
    print("Have you registered to vote yet?")  
else:  
    print("Sorry, you are too young to vote.")  
    print("Please register to vote as soon as you turn 18!")
```

```
## EXP-09 ##  
  
age = 12  
  
if age < 4:  
    print("Your admission cost is $0.")  
elif age < 18:  
    print("Your admission cost is $5.")  
else:  
    print("Your admission cost is $10.")
```

```
## EXP-10 ##

age = 12
if age < 4:
    price = 0
elif age < 18:
    price = 5
elif age < 65:
    price = 10
elif age >= 65:
    price = 5

print("Your admission cost is $" + str(price) + ".")
```

```
## EXP-11 ##

requested_toppings = ['mushrooms', 'extra cheese']
if 'mushrooms' in requested_toppings:
    print("Adding mushrooms.")
elif 'pepperoni' in requested_toppings:
    print("Adding pepperoni.")
elif 'extra cheese' in requested_toppings:
    print("Adding extra cheese.")

print("\nFinished making your pizza!")
```

IMPLEMENTATION

```
chapter_5_practice.py - C:/Users/Noor UI Ain/OneDrive - University of Engineering and Techn...
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## EXP-01 ##
cars = ['audi', 'bmw', 'subaru', 'toyota']
for car in cars:
    if car == 'bmw':
        print(car.upper())
    else:
        print(car.title())

## EXP-02 ##
car = 'Audi'
car == 'audi'

## EXP-03 ##
requested_topping = 'mushrooms'
if requested_topping != 'anchovies':
    print("Hold the anchovies!")

## EXP-04 ##
answer = 17
if answer != 42:
    print("That is not the correct answer. Please try again!")

## EXP-05 ##
requested_toppings = ['mushrooms', 'onions', 'pineapple']
'mushrooms' in requested_toppings
'pepperoni' in requested_toppings
```

```
chapter_5_practice.py - C:/Users/Noor UI Ain/OneDrive - University of Engineering and Techn...
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## EXP-06 ##
banned_users = ['andrew', 'carolina', 'david']
user = 'marie'
if user not in banned_users:
    print(user.title() + ", you can post a response if you wish.")

## EXP-07 ##
age = 19
if age >= 18:
    print("You are old enough to vote!")

## EXP-08 ##
age = 17
if age >= 18:
    print("You are old enough to vote!")
    print("Have you registered to vote yet?")
else:
    print("Sorry, you are too young to vote.")
    print("Please register to vote as soon as you turn 18!")

## EXP-09 ##
age = 12
if age < 4:
    print("Your admission cost is $0.")
elif age < 18:
    print("Your admission cost is $5.")
else:
    print("Your admission cost is $10.")

## EXP-10 ##
age = 12
if age < 4:
    price = 0
elif age < 18:
    price = 5
elif age < 65:
    price = 10
elif age >= 65:
    price = 5

print("Your admission cost is $" + str(price) + ".")

## EXP-11 ##
requested_toppings = ['mushrooms', 'extra cheese']
if 'mushrooms' in requested_toppings:
    print("Adding mushrooms.")
elif 'pepperoni' in requested_toppings:
    print("Adding pepperoni.")
elif 'extra cheese' in requested_toppings:
    print("Adding extra cheese.")

print("\nFinished making your pizza!")
```

OUTPUT

```
Python 3.12.2 (tags/v3.12.2:6abddd9, Feb  6 2024, 21:26:36) [MSC v.1937 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/Noor Ul Ain/OneDrive - University of Engineering and Technology Taxila/Desktop/chapter_5_practice.py
BMW
Toyota
Hold the anchovies!
That is not the correct answer. Please try again!
Marie, you can post a response if you wish.
You are old enough to vote!
Sorry, you are too young to vote.
Please register to vote as soon as you turn 18!
Your admission cost is $5.
Your admission cost is $5.
Adding mushrooms.
Finished making your pizza!
>>>
```

