



Lab 1

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Roll No: FA20-BSE-064

Subject: Artificial Intelligence

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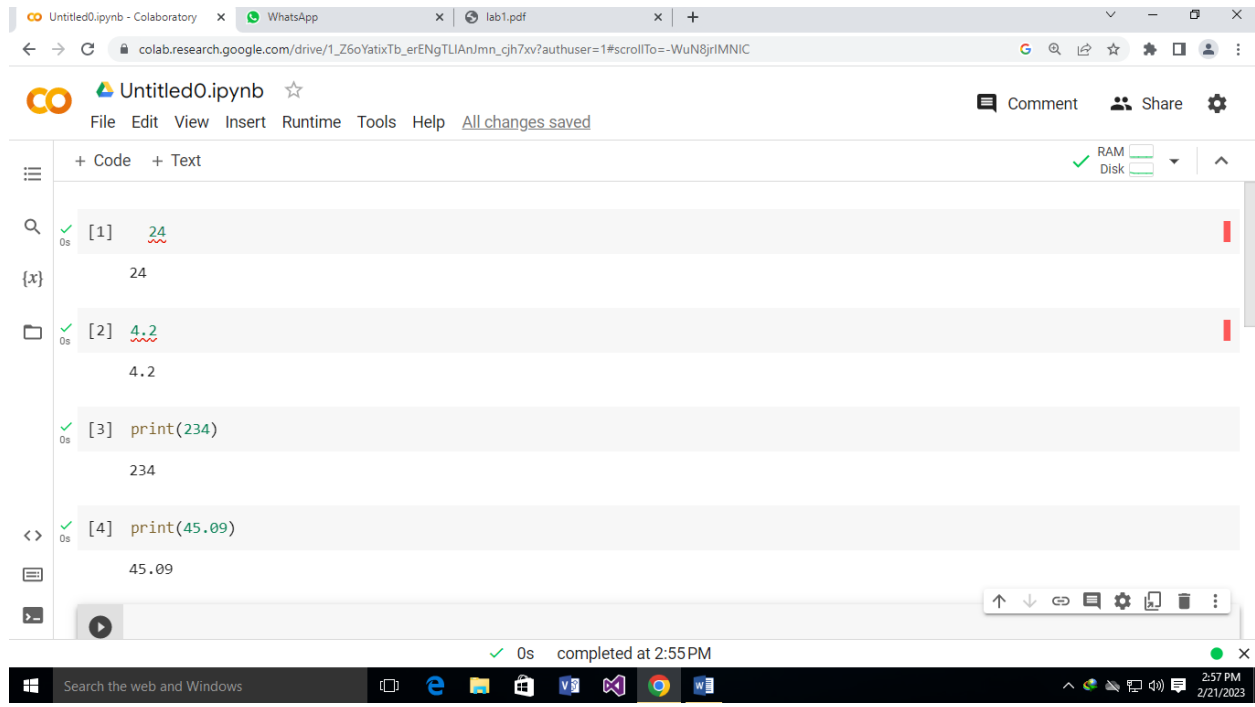
COMSATS University Islamabad

Vehari Campus

Lab Activities

Activity 1:

Display numbers on screen using Python IDLE.



The screenshot shows a Google Colaboratory notebook titled 'Untitled0.ipynb'. The interface includes a menu bar (File, Edit, View, Insert, Runtime, Tools, Help) and a toolbar with icons for search, file explorer, and code execution. The notebook contains four code cells, each with a green checkmark and '0s' indicating successful execution. The outputs are numerical values: 24, 4.2, 234, and 45.09. The bottom status bar shows 'completed at 2:55 PM' and the system clock '2:57 PM 2/21/2023'.

```
[1] 24
24

[2] 4.2
4.2

[3] print(234)
234

[4] print(45.09)
45.09
```

Activity 2:

Display strings on screen.

Untitled0.ipynb - Colaboratory x WhatsApp x lab1.pdf x +

colab.research.google.com/drive/1_Z6oYatixTb_erENGtLIAnJmn_gjh7xv?authuser=1#scrollTo=4tw7FKa7NaFI

CO Untitled0.ipynb ☆

File Edit View Insert Runtime Tools Help All changes saved

+ Code + Text

RAM Disk

[]

[5] Hello

Traceback (most recent call last)

`<ipython-input-5-1d229271928d> in <module>`

`--> 1 Hello`

`NameError: name 'Hello' is not defined`

SEARCH STACK OVERFLOW

0s completed at 3:01 PM

Search the web and Windows

3:02 PM 2/21/2023

Untitled0.ipynb - Colaboratory x WhatsApp x lab1.pdf x +

colab.research.google.com/drive/1_Z6oYatixTb_erENGtLIAnJmn_gjh7xv?authuser=1#scrollTo=4tw7FKa7NaFI

CO Untitled0.ipynb ☆

File Edit View Insert Runtime Tools Help All changes saved

+ Code + Text

RAM Disk

SEARCH STACK OVERFLOW

[6] 'Hello'

'Hello'

[7] 'Quote me on this!'

'Quote me on this!'

[8] "What's your name?"

'What's your name?'

0s completed at 3:01 PM

3:03 PM 2/21/2023

The screenshot shows a Google Colab notebook interface. The browser tabs include 'Untitled0.ipynb - Colaboratory', 'WhatsApp', and 'lab1.pdf'. The URL bar shows a Google Drive link. The notebook has a menu bar with 'File', 'Edit', 'View', 'Insert', 'Runtime', 'Tools', 'Help', and 'All changes saved'. The left sidebar shows icons for file explorer, search, and code execution. The main area has a code cell with the following Python code:

```
'What's your name?'
```

```
[9] '''This is a multi-line string. This is the first line.
     This is the second line.
     "What's your name?," I asked.
     He said "Bond, James Bond."
     '''
```

The output of the code cell is displayed below the code:

```
'This is a multi-line string. This is the first line.\nThis is the second line.\nWhat's your name?," I asked.\nHe said "Bond, James Bond."'
```

At the bottom, a status bar indicates '0s completed at 3:01 PM'.

Activity 3:

Use Python as a calculator.

The screenshot shows a Google Colab notebook interface. The browser tabs include 'Untitled0.ipynb - Colaboratory', 'WhatsApp', and 'lab1.pdf'. The URL bar shows a Google Drive link. The notebook has a menu bar with 'File', 'Edit', 'View', 'Insert', 'Runtime', 'Tools', 'Help', and 'All changes saved'. The left sidebar shows icons for file explorer, search, and code execution. The main area has five code cells, each performing an arithmetic operation:

```
[10] 2+2
```

4

```
[11] 50-4
```

46

```
[12] 23.5 - 2.0
```

21.5

```
[13] 23-18.5
```

4.5

```
[14] 5*6
```

30

At the bottom, a status bar indicates '0s completed at 3:08 PM'.

The screenshot shows a Google Colaboratory notebook titled 'Untitled0.ipynb'. The interface includes a top toolbar with 'File', 'Edit', 'View', 'Insert', 'Runtime', 'Tools', and 'Help' menus, along with 'Comment', 'Share', and 'Settings' icons. The notebook contains five code cells, each with a green checkmark and '0s' execution time. The operations and their outputs are as follows:

- Cell [15]: `2.5*10` → `25.0`
- Cell [16]: `2.5*2.5` → `6.25`
- Cell [17]: `28/4` → `7.0`
- Cell [18]: `26/4` → `6.5`
- Cell [19]: `23.4/3.1` → `7.548387096774193`

The bottom status bar indicates 'completed at 3:08 PM' on '2/21/2023'.

Activity 4:

Get an integer answer from division operation. Also, get remainder of a division operation in the output.

The screenshot shows a Google Colaboratory notebook titled 'Untitled0.ipynb'. The interface is similar to the previous one. The notebook contains three code cells, each with a green checkmark and '0s' execution time. The operations and their outputs are as follows:

- Cell [20]: `28//4` → `7`
- Cell [21]: `26//4` → `6`
- Cell [22]: `int(26/4)` → `6`

The bottom status bar indicates 'completed at 3:17 PM' on '2/21/2023'.

Untitled0.ipynb - Colaboratory x WhatsApp x lab1.pdf x +

colab.research.google.com/drive/1_Z6oYatixTb_erENgTLIAJmn_cjh7xv?authuser=1#scrollTo=-Wd2PUWRCzF

CO Untitled0.ipynb ☆

File Edit View Insert Runtime Tools Help All changes saved

+ Code + Text

✓ [23] int(28/4)

7

✓ [24] 28%4

0

✓ [25] 26%4

2

✓ 0s completed at 3:17 PM

Search the web and Windows

3:19 PM 2/21/2023

Activity 5:

Calculate 43, 410, 429, 4150, 41000

Untitled0.ipynb - Colaboratory x WhatsApp x lab1.pdf x +

colab.research.google.com/drive/1_Z6oYatixTb_erENgTLIAJmn_cjh7xv?authuser=1#scrollTo=JNZyoYr0SMVik

CO Untitled0.ipynb ☆

File Edit View Insert Runtime Tools Help All changes saved

+ Code + Text

✓ [27] 4**10

1048576

✓ [28] 4**29

288230376151711744

✓ [29] 4**150

2037035976334486086268445688409378161051468393665936250636140449354381299763336706183397376

✓ [30] 4**1000

114813069527425452423283320117768198402231770208869520047764273682576626139237031385665948631650626991844596463898746277344711

✓ 0s completed at 3:22 PM

Search the web and Windows

3:22 PM 2/21/2023

Activity 6:

Calculate expressions using operators' precedence.

The screenshot shows a Google Colaboratory notebook titled "Untitled0.ipynb". The interface includes a menu bar with "File", "Edit", "View", "Insert", "Runtime", "Tools", and "Help", along with a status "All changes saved". On the right, there are icons for "Comment", "Share", and "Settings". The left sidebar shows a file explorer with a folder icon and a search icon. The main area contains three code cells, each with a green checkmark and "0s" indicating successful execution:

- Cell [31]: `2+3*6` results in `20`.
- Cell [32]: `(2+3)*6` results in `30`.
- Cell [33]: `48565878* 578453` results in `28093077826734`.

At the bottom, a status bar indicates "0s completed at 3:31 PM". The Windows taskbar at the very bottom shows the search bar and various application icons.

The screenshot shows a Google Colaboratory notebook titled "Untitled0.ipynb". The interface is similar to the first screenshot, with the same menu bar and sidebar. The main area contains four code cells, each with a green checkmark and "0s" indicating successful execution:

- Cell [34]: `2 + 2` results in `4`.
- Cell [35]: `(5 - 1) * ((7 + 1) / (3 - 1))` results in `16.0`.
- Cell [38]: `5 + 4` results in `9`.
- Cell [39]: `42+5 + 2` results in `49`.

At the bottom, a status bar indicates "0s completed at 3:31 PM". The Windows taskbar at the very bottom shows the search bar and various application icons.