

# Adamson University College of Engineering Computer Engineering Department



## **OBJECT-ORIENTED PROGRAMMING**

Laboratory Activity No. 6

Table Implementation in PyCharm

Submitted by:

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## I. Objectives

• To write a program that displays the following image

```
a a^2 a^3
1 1 1
2 4 8
3 9 27
4 16 64
```

#### II. Methods

```
print("a\t\ta^2\t\ta^3")
a = 1
while a \le 4:
print("\{\}\t\t\{\}\t\t\{\}\}".format(a, a**2, a**3))
a += 1
```

The first line of the code is a simple print statement that outputs the header of the table: "a", "a^2", and "a^3", separated by tabs.

The next line initializes the variable 'a' to 1.

The while loop runs as long as 'a' is less than or equal to 4.

Within the loop, the print statement uses string formatting to display the value of 'a', its square (calculated using the exponentiation operator "), and its cube (calculated using the exponentiation operator twice). The '{}' placeholders in the format string are replaced by the values of 'a', 'a2', and 'a\*\*3', respectively.

After each iteration of the loop, the value of 'a' is incremented by 1 using the shorthand notation 'a += 1'.

When the loop terminates, the program exits. The output of the program is a table of values, with each row containing a value of 'a', 'a^2', and 'a^3'. The '\t' characters in the print statements are used to separate the columns by a tab character.

#### III. Results

### IV. Conclusion

In conclusion, one can create a program that displays the supplied table using either the TUI (Text User Interface) or GUI (Graphical User Interface) form. TUI employs a command line interface to show the table in a text format, in contrast to GUI, which uses a visual interface to do so.

Depending on the specific needs of the project and the user's preferences, TUI or GUI should be utilised. Both TUI and GUI forms have benefits and drawbacks, so it's critical to select the one that best suits the requirements of the project.