

# VaultofCodes

## AI & Prompt Engineering

### Assignment 1

#### Objective:

This assignment is designed to test your basic knowledge of Python programming. You are expected to apply fundamental concepts such as variables, data types, control structures, functions, and basic data structures to solve the given problems.

#### Question 1: Temperature Converter

Write a Python function named `convert_temperature` that converts temperatures between Fahrenheit and Celsius. The function should take two arguments: the temperature to convert and the unit of the input temperature ('F' for Fahrenheit, 'C' for Celsius). The function should return the converted temperature.

#### Requirements:

- If the input unit is 'F', convert the temperature to Celsius.
- If the input unit is 'C', convert the temperature to Fahrenheit.
- Round the result to 2 decimal places.

#### Formulae:

- Celsius to Fahrenheit:  $(C \times 9/5) + 32$
- Fahrenheit to Celsius:  $(F - 32) \times 5/9$

#### Hints:

- Use conditional statements to handle the conversion based on the unit.
- Use the `round()` function to round off the result.

#### Python Code:

```
def convert_temperature(temp, unit):  
    if unit == 'F':  
        return round((temp - 32) * 5/9, 2)  
    elif unit == 'C':
```

```
        return round((temp * 9/5) + 32, 2)
    else:
        return "Invalid unit. Use 'F' for Fahrenheit or 'C' for Celsius."

# Example usage:
print(convert_temperature(100, 'C')) # Output: 212.0
print(convert_temperature(212, 'F')) # Output: 100.0
```

## Assignment 2

To learn about the basics of AI & prompt engineering and to get an overview of the subjects - Do your own research and create a presentation of 6-8 slides using Microsoft PowerPoint.

Presentation should include:

- Introduction to AI & Prompt Engineering
- Importance & Applications
- Key concepts
- Future Scope