LEVEL 1

Task 1

```python
"""function that takes a string as input and
returns the reverse of that string: """

def reverse_string(input_string):
    reversed_string = input_string[::-1]
    return reversed_string

"""function by passing a string as an argument and
it will return the reversed version of that string"""

input_string = input("Enter a string: ")
reversed_string = reverse_string(input_string)
print("Reversed string:", reversed_string)
```

OutPut-

```
Enter a string: Bhushan
Reversed string: nahsuhB
PS C:\Users\cw\Desktop\Python Internship>
```

LEVEL 1

Task 2

```python
temperature = float(input("Enter the temperature value: "))
#This line asks the user to enter the temp value and stores it in the variable
`temperature`.input string to a floating-point number

unit = input("Enter the unit of measurement (C for Celsius, F for Fahrenheit): ")
# This line asks the user to enter the unit of measurement and stores it in the
variable `unit`.

if unit.upper() == "C":
# This line checks if the unit of measurement is Celsius. If it is, the code
converts the temperature to Fahrenheit and prints the result.
    converted_temperature = (temperature * 9/5) + 32
    print(f"{temperature}°C is equal to {converted_temperature}°F")
elif unit.upper() == "F":
    converted_temperature = (temperature - 32) * 5/9
    print(f"{temperature}°F is equal to {converted_temperature}°C")
else:
# This line prints an error message if the unit of measurement is invalid.
    print("Invalid unit of measurement.")
```

OutPut-

```
Enter the temperature value: 12
Enter the unit of measurement (C for Celsius, F for Fahrenheit): C
12.0°C is equal to 53.6°F
PS C:\Users\cw\Desktop\Python Internship>
```

LEVEL 1

Task 3

```python
import re

def is_valid_email(email):
    """
    Validates an email address.
    This function validates an email address by checking if
    it matches a regular expression pattern.
    """
    # Email pattern for basic validation
    pattern = r'^[\w\.-]+@[\w\.-]+\.\w+$' #(string1)@(string2).(2+characters)

    """
    The regular expression pattern matches any string that starts with a word character or a hyphen,
    followed by zero or more word characters, hyphens, or periods, followed by an @ symbol,
    followed by zero or more word characters, hyphens, or periods, followed by a domain name,
    followed by a top-level domain. consist of only letters or numbers.
    """

    # Check if the email matches the pattern
    if re.match(pattern, email):
        return True
    else:
        return False


email = input("Enter an email address: ")
if is_valid_email(email):
    print("Valid email address")
else:
    print("Invalid email address")
```

OutPut-

```
Enter an email address: bhushan569@gmail.com
Valid email address
PS C:\Users\cw\Desktop\Python Internship>
```

LEVEL 1

Task 4

```
print("Thise is Calculator Program")
# Prompt the user to enter two numbers
num1 = float(input("Enter the first number: "))
num2 = float(input("Enter the second number: "))
# Prompt the user to choose an operator
print("Select an operator:")
print("1. Addition (+)")
print("2. Subtraction (-)")
print("3. Multiplication (*)")
print("4. Division (/)")
print("5. Modulus (%)")
operator = input("Enter the operator 1-5: ")
if operator == '1':
    result = num1 + num2
    operator_name = "Addition"
elif operator == '2':
    result = num1 - num2
    operator_name = "Subtraction"
elif operator == '3':
    result = num1 * num2
    operator_name = "Multiplication"
elif operator == '4':
    result = num1 / num2
    operator_name = "Division"
elif operator == '5':
    result = num1 % num2
    operator_name = "Modulus"
else:
    print("Invalid operator!")
#Result with the operator name
if result is not None and operator_name is not None:
    print(f"The result of {operator_name} is: {result}")
```

OutPut-

```
Thise is Calculator Program
Enter the first number: 12
Enter the second number: 12
Select an operator:
1. Addition (+)
2. Subtraction (-)
3. Multiplication (*)
4. Division (/)
5. Modulus (%)
Enter the operator 1-5: 3
The result of Multiplication is: 144.0
PS C:\Users\cw\Desktop\Python Internship>
```

LEVEL 1

Task 5

```python
#create a function
def palindrome(string):

#Returns bool: True if the string is a palindrome, False otherwise.

    reversed_string = string[::-1]
    return string == reversed_string

# User to enter a string and check whether it is a palindrome
string = input("Enter a string: ")
if palindrome(string):
    print("The string is a palindrome.")
else:
    print("The string is not a palindrome.")
```

OutPut-

```
Enter a string: Madum
The string is not a palindrome.
PS C:\Users\cw\Desktop\Python Internship>
```