program3

January 3, 2025

1. Modify your greeting program so that if the user does not enter a name (i.e. they just press enter), the program responds “Hello, Stranger!” Otherwis,e it should prin a greeting with their name as before.

[2]:
```
name = input("Enter your name: ")
if name == "":
    print("Hello, Stranger!")
else:
    print(f"Hello, {name}!")
```

```
Enter your name:
```

```
Hello, Stranger!
```

2. Write a program that simulates the way in which a user might choose a password. The program should prompt for a new password, and then prompt again. If the tw passwords entered are the same the program should say “Password Set” r similar, otherwise it should report an error.

[3]:
```
password = input("Enter the password: ")
confirm_password = input("Confirm the password: ")

if password == confirm_password:
    print("Password Set")
else:
    print("Sorry! The password did not match")
```

```
Enter the password:  123
Confirm the password:  123
```

```
Password Set
```

3. Modify your previous program so that the password must be between 8 and 12 characters (inclusive) long.

[4]:
```
password = input("Enter the password: ")

if len(password)<8 or len(password)>12:
    print("Password must be between 8 to 12 characters long.")
else:
```

```
    confirm_password = input("Confirm the password: ")

    if password == confirm_password:
        print("Password Set")
    else:
        print("Sorry! The password did not match")
```

```
Enter the password:  1234

Password must be between 8 to 12 characters long.
```

4. Modify your program again so that the chosen password cannot be one of a list of common passwords, defined thus: BAD_PASSWORDS = [‘password’, ‘letmein’, ‘sesame’, ‘hello’, ‘justinbieber’]

[5]:
```
BAD_PASSWORDS = ['password', 'letmein', 'sesame', 'hello', 'justinbieber']

password = input("Enter the password: ")

if len(password)<8 or len(password)>12:
    print("Password must be between 8 to 12 characters long.")
elif password.lower() in [bad.lower() for bad in BAD_PASSWORDS]:
    print("The password you entered is too common. Please choose a strong␣
 ↪password.")
else:
    confirm_password = input("Confirm the password: ")

    if password == confirm_password:
        print("Password Set")
    else:
        print("Sorry! The password did not match")
```

```
Enter the password:  password

The password you entered is too common. Please choose a strong password.
```

5. Modify your program a final time so that it executes until the user successfully chooses a password. That is, if the password chosen fails any of the checks, th program should return to asking for the password the first time.

[1]:
```
BAD_PASSWORDS = ['password', 'letmein', 'sesame', 'hello', 'justinbieber']

def password_validation(password):
    if len(password)<8 or len(password)>12:
        print("Password must be between 8 to 12 characters long.")
        return False

    if password.lower() in [bad.lower() for bad in BAD_PASSWORDS]:
        print("The password you entered is too common. Please choose a strong␣
 ↪password.")
```

```
        return False

    return True

def main():
    while True:
        password = input("Enter the password: ")

        if password_validation(password):
            confirm_password = input("Confirm the password: ")

            if password == confirm_password:
                print("Password Set")
                break
            else:
                print("Sorry! The password did not match")
        else:
            print("Please enter a valid password.")

main()
```

```
Enter the password:  123#anmk
Confirm the password:  123#anmk

Password Set
```

6. Write a program that displays the "Seven Times Table". That is, the result of multiplying 7 by every number from 0 to 12 inclusive. The output might start: 0 x 7 = 0 1 x 7 = 7 2 x 7 = 14 and so on.

[2]:
```
for i in range(13):
    print(f"{i} * 7 = {i*7}")
```

```
0 * 7 = 0
1 * 7 = 7
2 * 7 = 14
3 * 7 = 21
4 * 7 = 28
5 * 7 = 35
6 * 7 = 42
7 * 7 = 49
8 * 7 = 56
9 * 7 = 63
10 * 7 = 70
11 * 7 = 77
12 * 7 = 84
```

7. Modify your "Times Table" program so that the user enters the number of the table they require. This number should be between 0 and 12 inclusive.

[8]:
```
user_input = int(input("Enter a number between 0 to 12"))

if 0<= user_input <=12:
    for i in range(13):
        print(f"{i} * {user_input} = {i*user_input}")
else:
    print("Please enter a valid number between 0 and 12")
```

```
Enter a number between 0 to 12 -1

Please enter a valid number between 0 and 12
```

8. Modify the "Times Table" again so that the user still enters the number of the table, but if this number is negative the table is printed backwards. So entering "-7" would produce the Seven Times Table starting at "12 times" down to "0 times".

[2]:
```
user_input = int(input("Enter a number between 0 to 12: "))

if -12<= user_input <=12:
    if user_input < 0:
        for i in range(12, -1, -1):
            print(f"{i} x {abs(user_input)} = {i * abs(user_input)}")
    else:
        for i in range(13):
            print(f"{i} * {user_input} = {i*user_input}")
else:
    print("Please enter a valid number between 0 and 12")
```

```
Enter a number between 0 to 12:  -6

12 x 6 = 72
11 x 6 = 66
10 x 6 = 60
9 x 6 = 54
8 x 6 = 48
7 x 6 = 42
6 x 6 = 36
5 x 6 = 30
4 x 6 = 24
3 x 6 = 18
2 x 6 = 12
1 x 6 = 6
0 x 6 = 0
```

[ ]:
```

```