Assignment No4:

Q2: Design a UserProfile class with public attributes for username and email. Add private attributes for __password and __security_question. Implement methods to get and set these attributes securely.

NOTE: This program takes input from the user for different methods and variables, this include private password and security question but there is and by which the user can get it view by entering its current password.

```
class UserProfile:

    def __init__(self, username, email):

        self.username = username

        self.email = email

        self.__password = ""

        self.__security_question = ""


    def get_password(self, current_password=None):

        if current_password is not None and current_password == self.__password:

            return self.__password

        else:

            return "You are not authorized to view the password."


    def set_password(self, current_password, new_password):

        if current_password == self.__password:

            self.__password = new_password

            print("Password updated successfully.")

        else:

            print("Incorrect current password. Password not updated.")
```

```python
    def get_question(self, current_password=None):

        if current_password is not None and current_password == self.__password:

            return self.__security_question

        else:

            return "You are not authorized to view the security question."


    def set_question(self, current_password, new_question):

        if current_password == self.__password:

            self.__security_question = new_question

            print("Security question updated successfully.")

        else:

            print("Incorrect current password. Security question not updated.")


username_input = input("Enter username: ")

email_input = input("Enter email: ")


user_profile = UserProfile(username_input, email_input)


current_password_input = input("Enter current password (leave blank if setting for the first time): ")

new_password_input = input("Enter new password: ")


user_profile.set_password(current_password_input, new_password_input)


current_question = input("Enter password to set security question: ")

new_question = input("Enter new security question: ")
```

```python
    user_profile.set_question(current_question, new_question)


view_password = input("Do you want to view password? (yes/no): ")
if view_password.lower() == "yes":

    current_password_input = input("Enter password to view the password: ")

    print(f"Your Password: {user_profile.get_password(current_password_input)}")


view_question = input("Do you want to view your security question? (yes/no): ")
if view_question.lower() == "yes":

    current_password_input = input("Enter password to view the security question: ")

    print(f"Your Security Question: {user_profile.get_question(current_password_input)}")


print(f"\nUser Profile Details:")

print(f"Username: {user_profile.username}")

print(f"Email: {user_profile.email}")
```