1. Login page:

- Success: Verify if a user will be able to login with a valid username and valid password

```
62      def test_01_login_valid_credentials(self):
63          """Test login with valid credentials."""
64          print("Running valid login test")
65          # Verify if a user will be able to login with a valid email and password
66          response = self.app.post('/', data={
67              'email': self.test_email,
68              'password': self.test_password
69          }, follow_redirects=True)
70          self.assertEqual(response.status_code, 200)
71          print("Valid login test completed successfully")
72
73      # def test_02_login_invalid_password(self):
74      #       """Test login with valid email but invalid password."""
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   GITLENS   PORTS   COMMENTS

```
(.venv) lucaschu@Ls-MacBook-Pro cisc327-group11 % /Users/lucaschu/Documents/GitHub/cisc327-group1
1/.venv/bin/python /Users/lucaschu/Documents/GitHub/cisc327-group11/test_app.py
Running valid login test
Valid login test completed successfully
.
_____
Ran 1 test in 0.242s

OK
```

- Failure: Verify if a user cannot login with a valid username and an invalid password

```
73      def test_02_login_invalid_password(self):
74          """Test login with valid email but invalid password."""
75          print("Running invalid login test")
76          # Verify if a user cannot login with a valid email and an invalid password
77          response = self.app.post('/', data={
78              'email': self.test_email,        Simone, 2 weeks ago • Simone (#2) ...
79              'password': 'wrongpassword'
80          }, follow_redirects=True)
81          self.assertIn(b'Invalid email or password', response.data)
82          print("Invalid login test completed successfully")
83
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   GITLENS   PORTS   COMMENTS

```
(.venv) lucaschu@Ls-MacBook-Pro cisc327-group11 % /Users/lucaschu/Documents/GitHub/cisc327-group11
nv/bin/python /Users/lucaschu/Documents/GitHub/cisc327-group11/test_app.py
Running invalid login test
Invalid login test completed successfully
.
_____
Ran 1 test in 0.240s

OK
```

2. Register page:
   - Success: Verify if a user can sign-up successfully with all the mandatory details

```python
84      def test_03_signup_success(self):
85          """Test successful signup with a new user email."""
86          print("Running signup success test")
87          # Verify if a user can sign up successfully
88          response = self.app.post('/signup', data={
89              'email': 'newuser@example.com',
90              'password': 'newpassword123'
91          }, follow_redirects=True)
92          self.assertIn(b'Account created successfully', response.data)
93          print("Signup success test completed successfully")
94
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   GITLENS   PORTS   COMMENTS

```
● (.venv) lucaschu@Ls-MacBook-Pro cisc327-group11 % /Users/lucaschu/Documents/GitHub/cisc327-group11
  nv/bin/python /Users/lucaschu/Documents/GitHub/cisc327-group11/test_app.py
  Running signup success test
  Signup success test completed successfully
  .
  ----------------------------------------------------------------------
  Ran 1 test in 0.256s

  OK
```

   - Failure: Verify if signing up with an existing email trigger an error

```python
95      def test_04_signup_existing_email(self):
96          """Test signup with an already existing user email."""
97          print("Running signup with existing email test")
98          # Verify if signing up with an existing email triggers an error
99          response = self.app.post('/signup', data={
100             'email': self.test_email,
101             'password': 'newpassword123'
102         }, follow_redirects=True)
103         self.assertIn(b'Email already exists', response.data)
104         print("Running signup with existing email test completed successfully")
105
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   GITLENS   PORTS   COMMENTS

```
(.venv) lucaschu@Ls-MacBook-Pro cisc327-group11 % /Users/lucaschu/Documents/GitHub/cisc327-group11
nv/bin/python /Users/lucaschu/Documents/GitHub/cisc327-group11/test_app.py
Running signup with existing email test
Running signup with existing email test completed successfully
.
----------------------------------------------------------------------
Ran 1 test in 0.158s

OK
```

3. Forget password:

- Success: Verify if the application identifies an existing email correctly during password recovery

```
106     def test_05_reset_password_success(self):
107         """Test successful password reset."""
108         print("Running reset password success test")
109         # Verify if a user can successfully reset their password
110         response = self.app.post(f'/reset_password/{self.test_email}', data={
111             'password': 'newpassword123'
112         }, follow_redirects=True)
113         self.assertIn(b'Password has been reset successfully', response.data)
114         print("Reset password success test completed successfully")
115
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   GITLENS   PORTS   COMMENTS

● (.venv) lucaschu@Ls-MacBook-Pro cisc327-group11 % /Users/lucaschu/Documents/GitHub/cisc327-group11
nv/bin/python /Users/lucaschu/Documents/GitHub/cisc327-group11/test_app.py
Running reset password success test
Reset password success test completed successfully
.
_____
Ran 1 test in 0.251s

OK

- Failure: Verify if the application identifies a non-existing email correctly during password recovery

```
116     def test_06_reset_password_no_password(self):
117         """Test reset password without providing a new password."""
118         print("Running reset password without password test")
119         # Verify if a user cannot reset their password without providing a new password
120         response = self.app.post(f'/reset_password/{self.test_email}', data={
121             'password': ''
122         }, follow_redirects=True)
123         self.assertIn(b'Please enter a new password', response.data)
124         print("Reset password without password test completed successfully")
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   GITLENS   PORTS   COMMENTS

● (.venv) lucaschu@Ls-MacBook-Pro cisc327-group11 % /Users/lucaschu/Documents/GitHub/cisc327-group11
nv/bin/python /Users/lucaschu/Documents/GitHub/cisc327-group11/test_app.py
Running reset password without password test
Reset password without password test completed successfully
.
_____
Ran 1 test in 0.133s

OK

4. Book flight:

- Success: Verify if a logged-in user can access the booking page

```python
126    def test_07_book_flight_success(self):
127        """Test accessing the flight booking page as a logged-in user."""
128        print("Running book flight page success test")
129        # Verify if a logged-in user can access the booking page
130        with self.app.session_transaction() as session:
131            session['email'] = self.test_email
132        response = self.app.get('/book_flight', follow_redirects=True)
133        self.assertEqual(response.status_code, 200)
134        print("Book flight page success test completed successfully")
135
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   GITLENS   PORTS   COMMENTS

```
(.venv) lucaschu@Ls-MacBook-Pro cisc327-group11 % /Users/lucaschu/Documents/GitHub/cisc327-group11/
nv/bin/python /Users/lucaschu/Documents/GitHub/cisc327-group11/test_app.py
Running book flight page success test
Book flight page success test completed successfully
.
----------------------------------------------------------------------
Ran 1 test in 0.151s

OK
```

5. Search flights:

- Success: Verify that a flight with available seats appears in search results

```python
136    def test_08_search_flights(self):
137        """Test searching for flights with available results."""
138        print("Running search flights with results test")
139        # Verify that a flight with available seats appears in search results
140        response = self.app.post('/search_flights', data={
141            'departure_airport': 'JFK',
142            'arrival_location': 'LAX',
143            'departure_date': '2024-11-05'
144        }, follow_redirects=True)
145        self.assertIn(b'AB123', response.data)  # Flight number should appear in search results
146        print("Search flights with results test completed successfully")
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   GITLENS   PORTS   COMMENTS

```
(.venv) lucaschu@Ls-MacBook-Pro cisc327-group11 % /Users/lucaschu/Documents/GitHub/cisc327-group11/.ver
bin/python /Users/lucaschu/Documents/GitHub/cisc327-group11/test_app.py
Running search flights with results test
Search flights with results test completed successfully
.
----------------------------------------------------------------------
Ran 1 test in 0.142s

OK
```

- Failure: Verify that no results are returned when there are no flights available

```python
148     def test_09_search_flights_no_results(self):
149         """Test searching for flights with no matching results."""
150         print("Running search flights with no results test")
151         # Verify that no results are returned when there are no flights available
152         response = self.app.post('/search_flights', data={
153             'departure_airport': 'JFK',
154             'arrival_location': 'LAX',
155             'departure_date': '2024-11-06'
156         }, follow_redirects=True)
157         self.assertIn(b'No flights match your search criteria', response.data)
158         print("Search flights with no results test completed successfully")
159
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   GITLENS   PORTS   COMMENTS

```
▶ (.venv) lucaschu@Ls-MacBook-Pro cisc327-group11 % /Users/lucaschu/Documents/GitHub/cisc327-group11
bin/python /Users/lucaschu/Documents/GitHub/cisc327-group11/test_app.py
Running search flights with no results test
Search flights with no results test completed successfully
.
_____
Ran 1 test in 0.139s

OK
```

6. Select seat:
   - Success: Verify that a user can select a seat for a flight

```python
160     def test_10_select_seat(self):
161         """Test selecting a seat for a specified flight."""
162         print("Running select seat test")
163         # Verify that a user can select a seat for a flight
164         with self.app.session_transaction() as session:
165             session['email'] = self.test_email
166         response = self.app.post(f'/select_seat/{self.test_flight.id}', data={
167             'seat': '1,1'  # Attempt to select seat in row 1, column 1
168         }, follow_redirects=True)
169         # Check that the selection redirects to the payment method page
170         self.assertEqual(response.status_code, 200)
171         print("Select seat test completed successfully")
172
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   GITLENS   PORTS   COMMENTS

```
bin/python /Users/lucaschu/Documents/GitHub/cisc327-group11/test_app.py
Running select seat test
/Users/lucaschu/Documents/GitHub/cisc327-group11/.venv/lib/python3.11/site-packages/flask_sqlalchemy/
y.py:30: LegacyAPIWarning: The Query.get() method is considered legacy as of the 1.x series of SQLAlc
 and becomes a legacy construct in 2.0. The method is now available as Session.get() (deprecated sinc
.0) (Background on SQLAlchemy 2.0 at: https://sqlalche.me/e/b8d9)
  rv = self.get(ident)
Select seat test completed successfully
.
_____
Ran 1 test in 0.143s

OK
```

7. Payment method:

- Success: Verify that a user can successfully complete payment and book a flight

```python
173    def test_11_payment_method_success(self):
174        """Test payment processing and booking confirmation."""
175        print("Running payment method success test")
176        # Verify that a user can successfully complete payment and book a flight
177        with self.app.session_transaction() as session:
178            session['email'] = self.test_email
179            session['selected_seat'] = "2B"
180            session['seat_row'] = 1
181            session['seat_col'] = 1
182            session['flight_id'] = self.test_flight.id
183        # Simulate payment success
184        response = self.app.post(f'/payment_method/{self.test_flight.id}', data={}, follow_redirects=True)
185        self.assertEqual(response.status_code, 200)
186        print("Payment method success test completed successfully")
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   GITLENS   PORTS   COMMENTS

```
● (.venv) lucaschu@Ls-MacBook-Pro cisc327-group11 % /Users/lucaschu/Documents/GitHub/cisc327-group11/.venv/
bin/python /Users/lucaschu/Documents/GitHub/cisc327-group11/test_app.py
Running payment method success test
/Users/lucaschu/Documents/GitHub/cisc327-group11/.venv/lib/python3.11/site-packages/flask_sqlalchemy/query.py:30: Leg
ng: The Query.get() method is considered legacy as of the 1.x series of SQLAlchemy and becomes a legacy construct in
thod is now available as Session.get() (deprecated since: 2.0) (Background on SQLAlchemy 2.0 at: https://sqlalche.me/
  rv = self.get(ident)
Payment method success test completed successfully
.
----------------------------------------------------------------------
Ran 1 test in 0.146s

OK
```

8. Booking history:

- Success: Verify that a user can access their booking history

```python
188    def test_12_booking_history(self):
189        """Test accessing booking history for logged-in user."""
190        print("Running booking history test")
191        # Verify that a user can access their booking history
192        with self.app.session_transaction() as session:
193            session['email'] = self.test_email
194        # Create a test booking for the user
195        with app.app_context():          You, 1 hour ago • update for A3 …
196            new_booking = Booking(
197                user_email=self.test_email,
198                flight_id=self.test_flight.id,
199                seats="2B",
200                seat_row=1,
201                seat_col=1
202            )
203            db.session.add(new_booking)
204            db.session.commit()
205        # Access booking history page
206        response = self.app.get('/booking_history', follow_redirects=True)
207        self.assertEqual(response.status_code, 200)
208        self.assertIn(b'2B', response.data)  # Verify booking appears in the history
209        print("Booking history test completed successfully")
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   GITLENS   PORTS   COMMENTS

```
● (.venv) lucaschu@Ls-MacBook-Pro cisc327-group11 % /Users/lucaschu/Documents/GitHub/cisc327-group11,
chu/Documents/GitHub/cisc327-group11/test_app.py
Running booking history test
Booking history test completed successfully
.
----------------------------------------------------------------------
Ran 1 test in 0.142s

OK
```

9. Cancel booking:
- Success: Verify that a user can cancel a booking

```python
211    def test_13_cancel_booking(self):
212        """Test canceling a booking by the logged-in user."""
213        print("Running cancel booking test")
214        with self.app.session_transaction() as session:
215            session['email'] = self.test_email # Log in the user
216        # Create a test booking to be canceled
217        with app.app_context():
218            booking = Booking(
219                user_email=self.test_email,
220                flight_id=self.test_flight.id,
221                seats="2B",
222                seat_row=1,
223                seat_col=1
224            )
225            db.session.add(booking)
226            db.session.commit()
227            booking_id = booking.id
228        # Send POST request to cancel the booking
229        response = self.app.post(f'/cancel_booking/{booking_id}', follow_redirects=True)
230        self.assertEqual(response.status_code, 200)
231        self.assertIn(b'Booking canceled successfully', response.data)
232        print("Cancel booking test completed successfully")
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL GITLENS PORTS COMMENTS

```
ted since: 2.0) (Background on SQLAlchemy 2.0 at: https://sqlalche.me/e/b8d9)
  rv = self.get(ident)
/Users/lucaschu/Documents/GitHub/cisc327-group11/app.py:361: LegacyAPIWarning: The Query.get() meth
 is considered legacy as of the 1.x series of SQLAlchemy and becomes a legacy construct in 2.0. The
ethod is now available as Session.get() (deprecated since: 2.0) (Background on SQLAlchemy 2.0 at: h
ps://sqlalche.me/e/b8d9)
  flight = Flight.query.get(booking.flight_id)
Cancel booking test completed successfully
.
----------------------------------------------------------------------
Ran 1 test in 0.146s

OK
```

10. Log out:
- Success: Verify if a user can successfully logout

```python
235    def test_14_logout(self):
236        """Test user logout functionality."""
237        print("Running logout test")
238        # Verify if a user can successfully logout
239        with self.app.session_transaction() as session:
240            session['email'] = self.test_email
241        response = self.app.get('/logout', follow_redirects=True)
242        self.assertEqual(response.status_code, 200)
243        self.assertIn(b'You have been logged out', response.data)
244        print("Logout test completed successfully")
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL GITLENS PORTS COMMENTS

```
(.venv) lucaschu@Ls-MacBook-Pro cisc327-group11 % /Users/lucaschu/Documents/GitHub/cisc327-group11
env/bin/python /Users/lucaschu/Documents/GitHub/cisc327-group11/test_app.py
Running logout test
Logout test completed successfully
.
----------------------------------------------------------------------
Ran 1 test in 0.135s

OK
```