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All tests are performed with GUI.

Test Design Document			
Test Case #	Requirement	Test description and Input Data	Expected result/output
1	Print empty member database and empty class schedule	Run the program. Click the Information Hub tab. 1. Click Member Database and print. 2. Click Class Schedule and show all classes. (Same as P and S in project 2)	<u>Output 1:</u> Member database is empty!  <u>Output 2:</u> Fitness class schedule is empty.
2	Add standard member	Go to the Membership tab, Write down the First Name, Last Name, Date of Birth, Location of the gym, and Membership type (standard) and click Add button. + <u>input data 1(With the age under 18):</u> First name: John Last name: Doe Date of birth: 9/2/2022 Gym location: BRIDGEWATER  <u>Input data 2(With the Future DOB):</u> First name: John Last name: Doe Date of birth: 9/1/2023 Gym location: BRIDGEWATER  <u>Input data 3(With the valid age):</u> First name: John Last name: Doe Date of birth: 12/2/2002 Gym location: BRIDGEWATER	<u>Output 1:</u>  DOB 9/2/2022: must be 18 or older to join!  <u>Output 2:</u> DOB 9/1/2023: cannot be today or a future date!  <u>Output 3:</u> John Doe added.

3	Import member list and class list from txt file.	<p>Click the information Hub tab.</p> <ol style="list-style-type: none"> <li>1. Click the Member Database and Load member list from file button.</li> <li>2. Click the Class Schedule and Load class schedule from file button.</li> </ol>	<p><u>Output 1:</u></p> <p>-list of members loaded-</p> <p>John Doe, DOB: 12/2/2002, Membership expires 2/7/2023, Location: BRIDGEWATER, 08807, SOMERSET</p> <p>John Doe, DOB: 1/20/2004, Membership expires 2/15/2023, Location: BRIDGEWATER, 08807, SOMERSET</p> <p>John Doe, DOB: 1/20/2003, Membership expires 3/30/2021, Location: BRIDGEWATER, 08807, SOMERSET</p> <p>Jane Doe, DOB: 5/1/1996, Membership expires 6/20/2023, Location: EDISON, 08837, MIDDLESEX</p> <p>April March, DOB: 3/31/1990, Membership expires 12/30/2022, Location: PISCATAWAY, 08854, MIDDLESEX</p> <p>Mary Lindsey, DOB: 12/1/1989, Membership expires 5/31/2023, Location: FRANKLIN, 08873, SOMERSET</p> <p>Duke Ellington, DOB: 2/29/2000, Membership expires 4/30/2023, Location: FRANKLIN, 08873, SOMERSET</p> <p>Roy Brooks, DOB: 8/8/1977, Membership expires 9/30/2020, Location: SOMERVILLE, 08876, SOMERSET</p> <p>Roy Brooks, DOB: 9/9/1977, Membership expires 10/30/2022, Location: SOMERVILLE, 08876, SOMERSET</p> <p>Kate Lindsey, DOB: 7/15/1977, Membership expires 8/31/2023, Location: SOMERVILLE, 08876, SOMERSET</p> <p>Carl Brown, DOB: 10/7/1991, Membership expires 3/31/2023, Location: PISCATAWAY, 08854, MIDDLESEX</p> <p>Paul Siegel, DOB: 5/1/1999, Membership expires 1/31/2022, Location: EDISON, 08837, MIDDLESEX</p> <p>Bill Scanlan, DOB: 5/1/1999, Membership expires 1/31/2023, Location: EDISON, 08837, MIDDLESEX</p> <p>-end of class list-</p> <p><u>Output 2:</u></p> <p>-Fitness classes loaded-</p> <p>PILATES - JENNIFER, 9:30, BRIDGEWATER</p> <p>SPINNING - JENNIFER, 14:00, PISCATAWAY</p> <p>CARDIO - JENNIFER, 18:30, SOMERVILLE</p> <p>PILATES - KIM, 9:30, FRANKLIN</p> <p>SPINNING - KIM, 14:00, FRANKLIN</p> <p>CARDIO - KIM, 18:30, PISCATAWAY</p>
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			PILATES - DAVIS, 9:30, PISCATAWAY PILATES - DAVIS, 14:00, EDISON CARDIO - DAVIS, 18:30, BRIDGEWATER SPINNING - DENISE, 9:30, BRIDGEWATER CARDIO - DENISE, 14:00, SOMERVILLE SPINNING - DENISE, 18:30, EDISON SPINNING - EMMA, 9:30, FRANKLIN PILATES - EMMA, 14:00, EDISON CARDIO - EMMA, 18:30, EDISON -end of class list.
4	Add Family member	Same instruction with test #2 but choose the option "Family" instead of "Standard" for membership type.  <u>Input data 1(With the age under 18)</u> First name: Jerry Last name: Brown Date of birth: 6/30/2005 Gym location: Edison  <u>Input data 2(With the valid age):</u> First name: Jerry Last name: Brown Date of birth: 6/30/1979 Gym location: Edison	<u>Output 1:</u> DOB 6/30/2005: must be 18 or older to join!  <u>Output 2:</u> Jerry Brown added.
5	Add Premium Member	Same instruction with test #2 but choose the option "Premium" instead of "standard" for membership type.  <u>Input data 1(With the age under 18)</u> First name: Jonnathan Last name: Wei Date of birth: 9/21/2009 Gym location: bridgewater <u>Input data 2(With the valid age):</u> First name: Jonnathan Last name: Wei Date of birth: 9/21/1992 Gym location: bridgewater	<u>Output 1:</u> DOB 9/21/2009: must be 18 or older to join!  <u>Output 2:</u> Jonnathan Wei added.
6	Remove member from database	Write down first name, last name, and Date of birth and	<u>Output 1:</u> Paul Siegel removed.

		<p>click the “Remove” button. (location and membership type don’t matter)</p> <p><u>Input data 1(legal removal)</u> First name: Paul Last name: Siegel Date of birth:5/1/1999</p> <p><u>Input data 2(remove same target again)</u> First name: Paul Last name: Siegel Date of birth:5/1/1999</p>	<p><u>Output 2:</u> Paul Siegel is not in the database.</p>
7	Check in member to the class.	<p>Go to the Fitness Class tab. Write down first name, last name, dob, Instructor, location, and class type. Set student type as “member” and click the check in button.</p> <p><u>Input data 1 (legal check in)</u> First name: Mary Last name: Lindsey DOB: 12/1/1989 Instructor: Kim Class: Pilates Location: Franklin</p> <p><u>Input data 2 (check in to same class)</u> First name: Mary Last name: Lindsey DOB: 12/1/1989 Instructor: Kim Class: Pilates Location: Franklin</p> <p><u>Input data 3 (Time conflict class)</u> First name: Mary Last name: Lindsey DOB: 12/1/1989 Instructor: emma Class: spinning Location: Franklin</p> <p><u>Input data 4 (Location restriction class)</u> First name: Mary Last name: Lindsey</p>	<p><u>Output 1:</u> Mary Lindsey checked in PILATES - KIM, 9:30, FRANKLIN - Participants - Mary Lindsey, DOB: 12/1/1989, Membership expires 5/31/2023, Location: FRANKLIN, 08873, SOMERSET</p> <p><u>Output 2:</u> Mary Lindsey already checked in.</p> <p><u>Output 3:</u> Time conflict - SPINNING - EMMA, 9:30, FRANKLIN, 08873, SOMERSET</p> <p><u>Output 4:</u> Mary Lindsey checking in EDISON, 08837, MIDDLESEX - standard membership location restriction.</p> <p><u>Output 5:</u> Jerry Brown checked in PILATES - DAVIS, 9:30, PISCATAWAY - Participants - Jerry Brown, DOB: 6/30/1979, Membership expires 2/7/2023, Location: EDISON, 08837, MIDDLESEX, (Family) guess-pass remaining: 1</p>

		<p>DOB: 12/1/1989 Instructor: emma Class: pilates Location: edison</p> <p><u>Input data 5 (Family or premium membership can check-in anywhere)</u> First name: Jerry Last name: Brown DOB: 6/30/1979 Instructor: Davis class: pilates Location: Piscataway</p>	
8	Check In Guest	<p>Same instructions with test #7, but choose the student type as "guest".</p> <p><u>Input data 1 (Standard membership)</u> First name: Mary Last name: Lindsey DOB: 12/1/1989 Instructor: Kim Class: Pilates Location: Franklin</p> <p><u>Input data 2 (Family membership with guest pass)</u> First name: Jerry Last name: Brown DOB: 6/30/1979 Instructor: Emma class: pilates Location: Edison</p> <p><u>Input data 3 (0 guest pass remaining)</u> First name: Jerry Last name: Brown DOB: 6/30/1979 Instructor: Emma class: pilates Location: Edison</p>	<p><u>Output 1:</u> Standard membership - guest check-in is not allowed.</p> <p><u>Output 2:</u> Jerry Brown (guest) checked in PILATES - EMMA, 14:00, EDISON - Guests - Jerry Brown, DOB: 6/30/1979, Membership expires 2/7/2023, Location: EDISON, 08837, MIDDLESEX, (Family) guess-pass remaining: 0</p> <p><u>Output 3:</u> Jerry Brown ran out of guest pass.</p>
9	Drop Member from the fitness class.	<p>Follow same instructions with test #7, but click the check out button at the end.</p> <p><u>Input data 1 (legal check out)</u> First name: Mary</p>	Mary Lindsey done with the class.

		Last name: Lindsey DOB: 12/1/1989 Instructor: Kim Class: Pilates Location: Franklin	
10	Drop Guest	Follow same instructions with test #8, but click the check out button at the end.  <u>Input data 1 (Family membership with guest pass)</u> First name: Jerry Last name: Brown DOB: 6/30/1979 Instructor: Davis class: pilates Location: Piscataway	Jerry Brown Guest done with the class.
11	Member List sorted by zipcode	Go to the Information Hub tab and click the "Member Database" button. Click print by county/zipcode button.	-list of members sorted by county and zipcode- Jane Doe, DOB: 5/1/1996, Membership expires 6/20/2023, Location: EDISON, 08837, MIDDLESEX Bill Scanlan, DOB: 5/1/1999, Membership expires 1/31/2023, Location: EDISON, 08837, MIDDLESEX Jerry Brown, DOB: 6/30/1979, Membership expires 2/7/2023, Location: EDISON, 08837, MIDDLESEX, (Family) guess-pass remaining: 1 April March, DOB: 3/31/1990, Membership expires 12/30/2022, Location: PISCATAWAY, 08854, MIDDLESEX Carl Brown, DOB: 10/7/1991, Membership expires 3/31/2023, Location: PISCATAWAY, 08854, MIDDLESEX John Doe, DOB: 12/2/2002, Membership expires 2/7/2023, Location: BRIDGEWATER, 08807, SOMERSET John Doe, DOB: 1/20/2004, Membership expires 2/15/2023, Location: BRIDGEWATER, 08807, SOMERSET John Doe, DOB: 1/20/2003, Membership expires 3/30/2021, Location: BRIDGEWATER, 08807, SOMERSET Jonnathan Wei, DOB: 9/21/1992, Membership expires 11/7/2023, Location: BRIDGEWATER, 08807, SOMERSET, (Premium) Guess-pass remaining: 3

			<p>Mary Lindsey, DOB: 12/1/1989, Membership expires 5/31/2023, Location: FRANKLIN, 08873, SOMERSET</p> <p>Duke Ellington, DOB: 2/29/2000, Membership expires 4/30/2023, Location: FRANKLIN, 08873, SOMERSET</p> <p>Roy Brooks, DOB: 8/8/1977, Membership expires 9/30/2020, Location: SOMERVILLE, 08876, SOMERSET</p> <p>Roy Brooks, DOB: 9/9/1977, Membership expires 10/30/2022, Location: SOMERVILLE, 08876, SOMERSET</p> <p>Kate Lindsey, DOB: 7/15/1977, Membership expires 8/31/2023, Location: SOMERVILLE, 08876, SOMERSET</p> <p>-end of list-</p>
12	Member List sorted by Name (Last name first)	Go to the "Information Hub" tab and click the "Member Database" button. Click "Print by Last/Firstname" button.	<p>-list of members sorted by last name, and first name-</p> <p>Roy Brooks, DOB: 8/8/1977, Membership expires 9/30/2020, Location: SOMERVILLE, 08876, SOMERSET</p> <p>Roy Brooks, DOB: 9/9/1977, Membership expires 10/30/2022, Location: SOMERVILLE, 08876, SOMERSET</p> <p>Carl Brown, DOB: 10/7/1991, Membership expires 3/31/2023, Location: PISCATAWAY, 08854, MIDDLESEX</p> <p>Jerry Brown, DOB: 6/30/1979, Membership expires 2/7/2023, Location: EDISON, 08837, MIDDLESEX, (Family) guess-pass remaining: 1</p> <p>Jane Doe, DOB: 5/1/1996, Membership expires 6/20/2023, Location: EDISON, 08837, MIDDLESEX</p> <p>John Doe, DOB: 12/2/2002, Membership expires 2/7/2023, Location: BRIDGEWATER, 08807, SOMERSET</p> <p>John Doe, DOB: 1/20/2004, Membership expires 2/15/2023, Location: BRIDGEWATER, 08807, SOMERSET</p> <p>John Doe, DOB: 1/20/2003, Membership expires 3/30/2021, Location: BRIDGEWATER, 08807, SOMERSET</p> <p>Duke Ellington, DOB: 2/29/2000, Membership expires 4/30/2023, Location: FRANKLIN, 08873, SOMERSET</p> <p>Kate Lindsey, DOB: 7/15/1977, Membership expires 8/31/2023, Location: SOMERVILLE, 08876, SOMERSET</p> <p>Mary Lindsey, DOB: 12/1/1989, Membership expires 5/31/2023, Location:</p>

			FRANKLIN, 08873, SOMERSET April March, DOB: 3/31/1990, Membership expires 12/30/2022, Location: PISCATAWAY, 08854, MIDDLESEX Bill Scanlan, DOB: 5/1/1999, Membership expires 1/31/2023, Location: EDISON, 08837, MIDDLESEX Jonnathan Wei, DOB: 9/21/1992, Membership expires 11/7/2023, Location: BRIDGEWATER, 08807, SOMERSET, (Premium) Guess-pass remaining: 3 -end of list-
13	Member List sorted by expiration date.	Go to the "Information Hub" tab and click the "Member Database" button. Click "Print by Expiration Date" button.	-list of members sorted by membership expiration date- Roy Brooks, DOB: 8/8/1977, Membership expires 9/30/2020, Location: SOMERVILLE, 08876, SOMERSET John Doe, DOB: 1/20/2003, Membership expires 3/30/2021, Location: BRIDGEWATER, 08807, SOMERSET Roy Brooks, DOB: 9/9/1977, Membership expires 10/30/2022, Location: SOMERVILLE, 08876, SOMERSET April March, DOB: 3/31/1990, Membership expires 12/30/2022, Location: PISCATAWAY, 08854, MIDDLESEX Bill Scanlan, DOB: 5/1/1999, Membership expires 1/31/2023, Location: EDISON, 08837, MIDDLESEX Jerry Brown, DOB: 6/30/1979, Membership expires 2/7/2023, Location: EDISON, 08837, MIDDLESEX, (Family) guess-pass remaining: 1 John Doe, DOB: 12/2/2002, Membership expires 2/7/2023, Location: BRIDGEWATER, 08807, SOMERSET John Doe, DOB: 1/20/2004, Membership expires 2/15/2023, Location: BRIDGEWATER, 08807, SOMERSET Carl Brown, DOB: 10/7/1991, Membership expires 3/31/2023, Location: PISCATAWAY, 08854, MIDDLESEX Duke Ellington, DOB: 2/29/2000, Membership expires 4/30/2023, Location: FRANKLIN, 08873, SOMERSET Mary Lindsey, DOB: 12/1/1989, Membership expires 5/31/2023, Location: FRANKLIN, 08873, SOMERSET Jane Doe, DOB: 5/1/1996, Membership expires 6/20/2023, Location: EDISON, 08837, MIDDLESEX



			<p>Kate Lindsey, DOB: 7/15/1977, Membership expires 8/31/2023, Location: SOMERVILLE, 08876, SOMERSET</p> <p>Jonnathan Wei, DOB: 9/21/1992, Membership expires 11/7/2023, Location: BRIDGEWATER, 08807, SOMERSET, (Premium) Guess-pass remaining: 3</p> <p>-end of list-</p>
14	Member List with the next membership fee	Go to the "Information Hub" tab and click the "Membership Fee" button. Click "Next Bill" button.	<p>-list of members with membership fees-</p> <p>Roy Brooks, DOB: 8/8/1977, Membership expires 9/30/2020, Location: SOMERVILLE, 08876, SOMERSET, Membership fee: \$149.96</p> <p>John Doe, DOB: 1/20/2003, Membership expires 3/30/2021, Location: BRIDGEWATER, 08807, SOMERSET, Membership fee: \$149.96</p> <p>Roy Brooks, DOB: 9/9/1977, Membership expires 10/30/2022, Location: SOMERVILLE, 08876, SOMERSET, Membership fee: \$149.96</p> <p>April March, DOB: 3/31/1990, Membership expires 12/30/2022, Location: PISCATAWAY, 08854, MIDDLESEX, Membership fee: \$149.96</p> <p>Bill Scanlan, DOB: 5/1/1999, Membership expires 1/31/2023, Location: EDISON, 08837, MIDDLESEX, Membership fee: \$149.96</p> <p>Jerry Brown, DOB: 6/30/1979, Membership expires 2/7/2023, Location: EDISON, 08837, MIDDLESEX, (Family) guess-pass remaining: 1, Membership fee: \$209.96</p> <p>John Doe, DOB: 12/2/2002, Membership expires 2/7/2023, Location: BRIDGEWATER, 08807, SOMERSET, Membership fee: \$149.96</p> <p>John Doe, DOB: 1/20/2004, Membership expires 2/15/2023, Location: BRIDGEWATER, 08807, SOMERSET, Membership fee: \$149.96</p> <p>Carl Brown, DOB: 10/7/1991, Membership expires 3/31/2023, Location: PISCATAWAY, 08854, MIDDLESEX, Membership fee: \$149.96</p> <p>Duke Ellington, DOB: 2/29/2000, Membership expires 4/30/2023, Location: FRANKLIN, 08873, SOMERSET, Membership fee: \$149.96</p> <p>Mary Lindsey, DOB: 12/1/1989, Membership expires 5/31/2023, Location:</p>

			FRANKLIN, 08873, SOMERSET, Membership fee: \$149.96 Jane Doe, DOB: 5/1/1996, Membership expires 6/20/2023, Location: EDISON, 08837, MIDDLESEX, Membership fee: \$149.96 Kate Lindsey, DOB: 7/15/1977, Membership expires 8/31/2023, Location: SOMERVILLE, 08876, SOMERSET, Membership fee: \$149.96 Jonnathan Wei, DOB: 9/21/1992, Membership expires 11/7/2023, Location: BRIDGEWATER, 08807, SOMERSET, (Premium) Guess-pass remaining: 3, Membership fee: \$659.89 -end of list-
15	Print Fitness class schedules.	Go to the "Information Hub" tab and click the "Class Schedule" button. Click "Show all classes" button.	-Fitness classes- PILATES - JENNIFER, 9:30, BRIDGEWATER SPINNING - JENNIFER, 14:00, PISCATAWAY CARDIO - JENNIFER, 18:30, SOMERVILLE PILATES - KIM, 9:30, FRANKLIN SPINNING - KIM, 14:00, FRANKLIN CARDIO - KIM, 18:30, PISCATAWAY PILATES - DAVIS, 9:30, PISCATAWAY - Participants - Jerry Brown, DOB: 6/30/1979, Membership expires 2/7/2023, Location: EDISON, 08837, MIDDLESEX, (Family) guess-pass remaining: 1 PILATES - DAVIS, 14:00, EDISON CARDIO - DAVIS, 18:30, BRIDGEWATER SPINNING - DENISE, 9:30, BRIDGEWATER CARDIO - DENISE, 14:00, SOMERVILLE SPINNING - DENISE, 18:30, EDISON SPINNING - EMMA, 9:30, FRANKLIN PILATES - EMMA, 14:00, EDISON CARDIO - EMMA, 18:30, EDISON  -end of class list.
16	Empty names entered	At "Membership" or "Fitness Class" Tab, if any of the first or last name is empty, the error will be handled and an error message will be printed	Invalid Name - must enter first name and last name

17	Empty date	At "Membership" or "Fitness Class" Tab, if date is not entered, the error will be handled and an error message will be printed	Invalid date - no date of birth data has been entered
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