

Test Execution Report

Test Procedure SPORTS-01 Recreational League Scheduling

Test Case: SPORTS-01-1 Schedule 8 Teams at a Single Venue

Purpose: Schedule 8 teams in one recreational league using a single venue with 4 fields and uniform availability. Ensure games are balanced, fields utilized evenly, no overlaps, and each team plays only once per day.

Owner: Development Team

Expected Results:

- No errors on scheduling.
- schedule.csv generated with correct headers.
- 28 games total (each of the 8 teams plays 7 games).
- Balanced field utilization and proper 2-hour time slots.
- Each team faces every other team exactly once.
- Each team plays only once per day.

Test Data: team.csv, league.csv, venue.csv in ./data/case1/

Command: ./bin/py/schedule case1

Expected Result: Program runs without errors, producing ./data/case1/schedule.csv.

Actual Result (Initial Run):

- Initially, some teams ended up playing multiple matches on the same day due to a logic gap.
- Also, one matchup was not scheduled as expected (only 26 games scheduled instead of 28).
- **Status:** FAIL

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Schedule

Case 1Case 2Case 3Case 4Case 5Case 6Case 7Case 8Generated

Test case1 passed!

Date	Time	League	Team 1	Team 2	Location
Tuesday, March 19th, 2024	5:00pm - 7:00pm	League 1	Team 1	Team 2	Venue 1 Field #1
Wednesday, March 20th, 2024	5:00pm - 7:00pm	League 1	Team 1	Team 3	Venue 1 Field #1
Thursday, March 21st, 2024	5:00pm - 7:00pm	League 1	Team 1	Team 4	Venue 1 Field #1
Friday, March 22nd, 2024	5:00pm - 7:00pm	League 1	Team 1	Team 5	Venue 1 Field #1
Saturday, March 23rd, 2024	5:00pm - 7:00pm	League 1	Team 1	Team 6	Venue 1 Field #1

Schedule

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Test case1 passed!

Date	Time	League	Team 1	Team 2	Location
Tuesday, March 19th, 2024	5:00pm - 7:00pm	League 1	Team 1	Team 2	Venue 1 Field #1
Tuesday, March 19th, 2024	5:00pm - 7:00pm	League 1	Team 3	Team 4	Venue 1 Field #2
Tuesday, March 19th, 2024	5:00pm - 7:00pm	League 1	Team 5	Team 6	Venue 1 Field #3
Tuesday, March 19th, 2024	5:00pm - 7:00pm	League 1	Team 7	Team 8	Venue 1 Field #4
Wednesday, March 20th, 2024	5:00pm - 7:00pm	League 1	Team 1	Team 3	Venue 1 Field #1

Issue Identified: The scheduler didn't enforce the "each team plays once per day" rule initially.

Fix Applied: Modified code to track daily counts per team and skip scheduling if a team already played that day.

Rerun Test:

- After the fix, the scheduler produced exactly 28 games, each team played once per day, and all headers/time slots checked out.
- **Status:** PASS

Test Procedure SPORTS-02 Multi-League Scheduling

Test Case: SPORTS-02-1 Schedule 8 Teams Across 3 Leagues

Purpose: Schedule 8 teams in 3 leagues at a single venue (4 fields, uniform availability). Ensure balanced distribution, no overlaps, correct headers, and once-per-day constraint.

Owner: Development Team

Expected Results:

- No errors.
- schedule.csv with correct headers.
- Games balanced across leagues.
- Even field utilization, 2-hour slots.
- Each team once per day.

Command: ./bin/py/schedule case2

Expected Result: Program runs without errors, producing ./data/case2/schedule.csv.

Actual Result (Initial Run):

- Initially, some league matchups were not balanced, and a few teams played more than once a day in certain scenarios.
- Status:** FAIL

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Schedule

Case 1 Case 2 Case 3 Case 4 Case 5 Case 6 Case 7 Case 8 Generated

Test case2 failed!

Date	Time	League	Team 1	Team 2	Location
Tuesday, March 19th, 2024	5:00pm - 7:00pm	League 1	Team 1	Team 2	Venue 1 Field #1
Wednesday, March 20th, 2024	5:00pm - 7:00pm	League 1	Team 1	Team 3	Venue 1 Field #1
Thursday, March 21st, 2024	5:00pm - 7:00pm	League 1	Team 1	Team 4	Venue 1 Field #1
Friday, March 22nd, 2024	5:00pm - 7:00pm	League 1	Team 1	Team 5	Venue 1 Field #1
Saturday, March 23rd, 2024	5:00pm - 7:00pm	League 1	Team 1	Team 6	Venue 1 Field #1

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Schedule

Case 1 Case 2 Case 3 Case 4 Case 5 Case 6 Case 7 Case 8 Generated

Test case2 passed!

Date	Time	League	Team 1	Team 2	Location
Tuesday, March 19th, 2024	5:00pm - 7:00pm	League 1	Team 1	Team 2	Venue 1 Field #1
Tuesday, March 19th, 2024	5:00pm - 7:00pm	League 1	Team 3	Team 4	Venue 1 Field #2
Tuesday, March 19th, 2024	5:00pm - 7:00pm	League 1	Team 5	Team 6	Venue 1 Field #3
Tuesday, March 19th, 2024	5:00pm - 7:00pm	League 1	Team 7	Team 8	Venue 1 Field #4
Wednesday, March 20th, 2024	5:00pm - 7:00pm	League 1	Team 1	Team 3	Venue 1 Field #1

Fix Applied: Adjusted logic to ensure the daily limit per team is strictly enforced.

Rerun Test:

- Schedule now balanced, correct game counts, teams appear once per day, no overlaps observed.
- **Status:** PASS

Test Procedure SPORTS-03 Single Field Scheduling

Test Case: SPORTS-03-1 Schedule 16 Teams at One Venue

Purpose: Schedule 16 teams in one league, single venue/field, uniform availability. Must fit all 120 matchups sequentially, 2-hour increments, no overlaps, one game per team per day.

Owner: Development Team

Expected Results:

- No errors.
- schedule.csv correct headers.
- 120 games total.
- Single field used sequentially.
- Teams only once per day.

Command: ./bin/py/schedule case3

Actual Result (Initial Run):

- Got only 63 matches scheduled because teams were being double-booked and we had no proper slot management.
- **Status:** FAIL

SPORTS

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Schedule

Case 1Case 2Case 3Case 4Case 5Case 6Case 7Case 8Generated

Test case3 failed!

Date	Time	League	Team 1	Team 2	Location
Tuesday, March 19th, 2024	9:00am - 11:00am	League 1	Team 1	Team 2	Venue 1 Field #1
Wednesday, March 20th, 2024	9:00am - 11:00am	League 1	Team 1	Team 3	Venue 1 Field #1
Thursday, March 21st, 2024	9:00am - 11:00am	League 1	Team 1	Team 4	Venue 1 Field #1
Friday, March 22nd, 2024	9:00am - 11:00am	League 1	Team 1	Team 5	Venue 1 Field #1
Saturday, March 23rd, 2024	9:00am - 11:00am	League 1	Team 1	Team 6	Venue 1 Field #1

Schedule

Case 1 Case 2 Case 3 Case 4 Case 5 Case 6 Case 7 Case 8 Generated

Test case3 passed!

Date	Time	League	Team 1	Team 2	Location
Tuesday, March 19th, 2024	9:00am - 11:00am	League 1	Team 1	Team 2	Venue 1 Field #1
Tuesday, March 19th, 2024	11:00am - 1:00pm	League 1	Team 3	Team 4	Venue 1 Field #1
Tuesday, March 19th, 2024	1:00pm - 3:00pm	League 1	Team 5	Team 6	Venue 1 Field #1
Wednesday, March 20th, 2024	9:00am - 11:00am	League 1	Team 1	Team 3	Venue 1 Field #1
Wednesday, March 20th, 2024	11:00am - 1:00pm	League 1	Team 2	Team 4	Venue 1 Field #1

Fix Applied: Introduced multiple time slot checks per day, strict daily limit per team.

Rerun Test:

- Achieved 120 matches total. Each team plays exactly once per day slot when needed, no overlaps.
- **Status:** PASS

Test Procedure SPORTS-04 Limited Availability

Test Case: SPORTS-04-1 Schedule 24 Teams with Limited Venue Availability

Purpose: 24 teams in one league, restricted times. Must schedule all matchups respecting limits, no overlaps, one team per day.

Owner: Development Team

Expected Results:

- No errors.
- Correct headers.
- All valid matchups scheduled within availability constraints.
- Even distribution, once per day per team.

Command: ./bin/py/schedule case4

Actual Result (Initial Run):

- Some matchups were not scheduled due to limited availability and teams playing multiple times a day initially.
- **Status:** FAIL

Fix Applied: With once-per-day rule enforced and multiple time slot iteration, re-run test.

Rerun Test:

- All matchups scheduled correctly, daily constraints met.
- **Status:** PASS

Schedule

- Case 1
- Case 2
- Case 3
- Case 4
- Case 5
- Case 6
- Case 7
- Case 8
- Generated

Test case4 failed!

Date	Time	League	Team 1	Team 2	Location
Tuesday, January 2nd, 2024	9:00am - 11:00am	League 1	Team 1	Team 2	Venue 1 Field #1
Wednesday, January 3rd, 2024	9:00am - 11:00am	League 1	Team 1	Team 3	Venue 1 Field #1
Thursday, January 4th, 2024	9:00am - 11:00am	League 1	Team 1	Team 4	Venue 1 Field #1
Friday, January 5th, 2024	9:00am - 11:00am	League 1	Team 1	Team 5	Venue 1 Field #1
Saturday, January 6th, 2024	9:00am - 11:00am	League 1	Team 1	Team 6	Venue 1 Field #1

Schedule

Case 1 Case 2 Case 3 Case 4 Case 5 Case 6 Case 7 Case 8 Generated

Test case4 passed!

Date	Time	League	Team 1	Team 2	Location
Tuesday, January 2nd, 2024	9:00am - 11:00am	League 1	Team 1	Team 2	Venue 1 Field #1
Tuesday, January 2nd, 2024	11:00am - 1:00pm	League 1	Team 3	Team 4	Venue 1 Field #1
Tuesday, January 2nd, 2024	1:00pm - 3:00pm	League 1	Team 5	Team 6	Venue 1 Field #1
Tuesday, January 2nd, 2024	3:00pm - 5:00pm	League 1	Team 7	Team 8	Venue 1 Field #1

Test Procedure SPORTS-05 to SPORTS-09

For Cases 5–9 (larger datasets, varied conditions):

Initial Runs:

- Similar issues observed: teams occasionally played more than once per day, or not all matches scheduled due to slot conflicts.

After Applying Fixes (enforcing once-per-day constraint, multiple time slot checks):

- All cases produced schedules as expected.
- Headers are correct.
- Teams only once per day.
- Balanced distributions where applicable.
- **Status for Cases 5–9: PASS**

Schedule

Case 1 Case 2 Case 3 Case 4 Case 5 Case 6 Case 7 Case 8 Generated

Test case5 passed!

Date	Time	League	Team 1	Team 2	Location
Tuesday, January 2nd, 2024	9:00am - 11:00am	Platinum League	Ericbury Wildcats	Debraton Bulls	Susanburgh Plaza Field #1
Thursday, January 4th, 2024	5:00am - 7:00am	Platinum League	Ericbury Wildcats	Anitaberg Bobcats	Susanburgh Plaza Field #1
Thursday, January 4th, 2024	7:00am - 9:00am	Platinum League	Debraton Bulls	Coxfurt Pirates	Susanburgh Plaza Field #1
Thursday, January 4th, 2024	9:00am - 11:00am	Platinum League	New Deborahmouth Dolphins	Jenniferborough Mavericks	Susanburgh Plaza Field #1

Schedule

Case 1 Case 2 Case 3 Case 4 Case 5 Case 6 Case 7 Case 8 Generated

Test case6 passed!

Date	Time	League	Team 1	Team 2	Location
Tuesday, January 2nd, 2024	0:00pm - 2:00pm	Platinum League	Raystad Commandos	Ramirezmouth Dolphins	West Cliffordborough Complex Field #1
Tuesday, January 2nd, 2024	2:00pm - 4:00pm	Obsidian League	New Douglas Wildcats	Vargasside Sabres	West Cliffordborough Complex Field #1
Tuesday, January 2nd, 2024	4:00pm - 6:00pm	Obsidian League	Bryantmouth Sabres	Port Laura Raptors	West Cliffordborough Complex Field #1
Tuesday, January 2nd, 2024	6:00pm - 8:00pm	Diamond League	Melissaland Warriors	Port Jessica Hawks	West Cliffordborough Complex Field

Schedule

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Test case7 passed!

Date	Time	League	Team 1	Team 2	Location
Tuesday, May 14th, 2024	1:00am - 3:00am	Platinum League	Brownburgh Pirates	Davidbury Chiefs	Johnsonmouth Hub Field #1
Tuesday, May 14th, 2024	3:00am - 5:00am	Obsidian League	New Anthony Bears	Port Danielstad Rappers	Johnsonmouth Hub Field #1
Tuesday, May 14th, 2024	5:00am - 7:00am	Obsidian League	South Stephen Vikings	Mcconnellbury Hawks	Johnsonmouth Hub Field #1
Tuesday, May 14th, 2024	7:00am - 9:00am	Diamond League	East Nicoleshire Jacks	Port Michelle Rappers	Johnsonmouth Hub Field #1
Wednesday, May 15th, 2024	4:00pm - 6:00pm	Platinum League	Brownburgh Pirates	Mooreview Eagles	Johnsonmouth Hub Field #1

Schedule

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Test case8 passed!

Date	Time	League	Team 1	Team 2	Location
Tuesday, June 4th, 2024	0:00am - 2:00am	Platinum League	East Jamesberg Mavericks	New Jacqueline Vikings	South Kimberly Plaza Field #1
Tuesday, June 4th, 2024	2:00am - 4:00am	Obsidian League	Brandonburgh Wildcats	North Robin Grizzlies	South Kimberly Plaza Field #1
Tuesday, June 4th, 2024	4:00am - 6:00am	Diamond League	West Wendy Rappers	Edwardstown Dolphins	South Kimberly Plaza Field #1
Wednesday, June 5th, 2024	0:00am - 2:00am	Platinum League	East Jamesberg Mavericks	South Jonathan Commandos	South Kimberly Plaza Field #1
Wednesday, June 5th, 2024	2:00am - 4:00am	Platinum League	New Jacqueline Vikings	North Adrianside Commandos	South Kimberly Plaza Field #1

Schedule

- Case 1
- Case 2
- Case 3
- Case 4
- Case 5
- Case 6
- Case 7
- Case 8
- Generated

Test generated passed!

Date	Time	League	Team 1	Team 2	Location
Tuesday, January 2nd, 2024	0:00am - 2:00am	Junior	South Robert Mavericks	New Timothyfort Raptors	Anthonyland Venue Field #1
Tuesday, January 2nd, 2024	0:00am - 2:00am	Recreational	Port Ericaberg Robbers	East Christopher Wolves	Anthonyland Venue Field #2
Tuesday, January 2nd, 2024	2:00am - 4:00am	Recreational	West Pamelamouth Dolphins	Monicaview Commandos	North Jeffrey Facility Field #3
Tuesday, January 2nd, 2024	2:00am - 4:00am	Competitive	West Bobby Sabres	Leeland Sabres	North Jeffrey Facility Field #4