[17:26:40] BHR Hamiltonian Path Solver (Python)

Enter value for P (number of vertices, e.g., 8): 60
Enter Frequency Partition (FP) as a comma-separated tuple (e.g., 0, 0, 2, 5): 9, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5

[17:29:25] Attempting to solve for P=60, FP=(9, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5)
[17:29:25] Representative Multiset: [1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5, 6, 6, 6, 6, 6, 7, 7, 7, 7, 7, 8, 8, 8, 8, 8, 9, 9, 9, 9, 9, 10, 10, 10, 10, 10, 11, 11, 11, 11, 11]

--- Results ---
[17:29:25] ✓ Path found for FP=(9, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5) in 0.4741 seconds.
Permutation: [1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 6, 5, 6, 5, 6, 5, 7, 5, 7, 6, 7, 6, 7, 9, 10, 9, 8, 7, 9, 8, 8, 10, 10, 9, 10, 11, 9, 11, 11, 8, 11, 11, 10, 8]
Path: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 15, 17, 19, 22, 25, 28, 31, 34, 38, 42, 46, 50, 54, 59, 53, 58, 52, 57, 51, 56, 49, 44, 37, 43, 36, 30, 23, 14, 24, 33, 41, 48, 39, 47, 55, 45, 35, 26, 16, 27, 18, 29, 40, 32, 21, 10, 20, 12]
Total Backtracks: 296322

[17:40:02] BHR Hamiltonian Path Solver (Python)

Enter value for P (number of vertices, e.g., 8): 55
Enter Frequency Partition (FP) as a comma-separated tuple (e.g., 0, 0, 2, 5): 9, 5, 5, 5, 5, 5, 4, 4, 4, 4, 4

[17:41:35] Attempting to solve for P=55, FP=(9, 5, 5, 5, 5, 5, 4, 4, 4, 4, 4)
[17:41:35] Representative Multiset: [1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5, 6, 6, 6, 6, 6, 7, 7, 7, 7, 7, 8, 8, 8, 8, 8, 9, 9, 9, 9, 9, 10, 10, 10, 10, 10, 11, 11, 11, 11, 11]

--- Results ---
[07:29:26] ✓ Path found for FP=(9, 5, 5, 5, 5, 5, 4, 4, 4, 4, 4) in 49670.4057 seconds.
Permutation: [1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 5, 5, 5, 6, 5, 7, 6, 5, 11, 7, 6, 7, 6, 8, 6, 9, 10, 9, 7, 10, 8, 8, 10, 8, 9, 11, 11, 9, 11, 10]
Path: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 15, 17, 19, 22, 25, 28, 31, 34, 38, 42, 46, 50, 54, 49, 44, 39, 45, 40, 47, 53, 48, 37, 30, 36, 29, 35, 27, 33, 24, 14, 23, 16, 26, 18, 10, 20, 12, 21, 32, 43, 52, 41, 51]
Total Backtracks: 13433910615

[17:33:07] BHR Hamiltonian Path Solver (Python)

Enter value for P (number of vertices, e.g., 8): 100
Enter Frequency Partition (FP) as a comma-separated tuple (e.g., 0, 0, 2, 5): 9,9,9,9,9,9,9,9,9,9

[17:34:05] Attempting to solve for P=100, FP=(9, 9, 9, 9, 9, 9, 9, 9, 9, 9)
[17:34:05] Representative Multiset: [1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6, 7, 7, 7, 7, 7, 7, 7, 7, 8, 8, 8, 8, 8, 8, 8, 8, 9, 9, 9, 9, 9, 9, 9, 9, 9, 10, 10, 10, 10, 10, 10, 10, 10, 11, 11, 11, 11, 11, 11, 11, 11, 11]

[17:37:20] BHR Hamiltonian Path Solver (Python)

Enter value for P (number of vertices, e.g., 8): 101

Enter Frequency Partition (FP) as a comma-separated tuple (e.g., 0, 0, 2, 5): 10,9,9,9,9,9,9,9,9,9

[17:38:21] Attempting to solve for P=101, FP=(10, 9, 9, 9, 9, 9, 9, 9, 9, 9)
[17:38:21] Representative Multiset: [1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 2, 2, 2, 2, 2, 2, 2, 2, 2, 3, 3, 3, 3, 3, 3, 3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 5, 5, 5, 5, 5, 5, 5, 5, 5, 6, 6, 6, 6, 6, 6, 6, 6, 6, 7, 7, 7, 7, 7, 7, 7, 7, 7, 8, 8, 8, 8, 8, 8, 8, 8, 8, 9, 9, 9, 9, 9, 9, 9, 9, 9, 10, 10, 10, 10, 10, 10, 10, 10, 10, 11, 11, 11, 11, 11, 11, 11, 11, 11]

--- Iteration 49 ---
Timestamp: 17:12:40
Method used: backtrack (Program 1 solver)
p (vertices): 199
Previous FP: Counter({1: 163, 2: 17, 3: 17})
Evolved FP: Counter({1: 164, 2: 17, 3: 17})
✓ BHR passed
✓ HP: [0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 166, 168, 165, 167, 169, 171, 173, 170, 172, 174, 176, 178, 181, 179, 182, 184, 187, 185, 188, 191, 194, 197, 195, 198, 196, 193, 190, 192, 189, 186, 183, 180, 177, 175]
HP freq: Counter({1: 164, 2: 17, 3: 17})
BACK Backtracks: 232192890
⏱ Time: 1572.20 sec
Result: SUCCESS

--- Iteration 50 ---
Timestamp: 17:38:52
Method used: reuse-insert
p (vertices): 200
Previous FP: Counter({1: 164, 2: 17, 3: 17})
Evolved FP: Counter({1: 164, 2: 18, 3: 17})
✓ BHR passed
✓ HP: [0, 199, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 166, 168, 165, 167, 169, 171, 173, 170, 172, 174, 176, 178, 181, 179, 182, 184, 187, 185, 188, 191, 194, 197, 195, 198, 196, 193, 190, 192, 189, 186, 183, 180, 177, 175]
HP freq: Counter({1: 164, 2: 18, 3: 17})
BACK Backtracks: 0

 Time: 0.00 sec
Result: SUCCESS

--- Final Summary ---
Total Successful Constructions: 50
Iteration 1: p = 151, Backtracks: 17
Iteration 2: p = 152, Backtracks: 0
Iteration 3: p = 153, Backtracks: 0
Iteration 4: p = 154, Backtracks: 11
Iteration 5: p = 155, Backtracks: 0
Iteration 6: p = 156, Backtracks: 0
Iteration 7: p = 157, Backtracks: 19
Iteration 8: p = 158, Backtracks: 0
Iteration 9: p = 159, Backtracks: 0
Iteration 10: p = 160, Backtracks: 58
Iteration 11: p = 161, Backtracks: 0
Iteration 12: p = 162, Backtracks: 0
Iteration 13: p = 163, Backtracks: 167
Iteration 14: p = 164, Backtracks: 0
Iteration 15: p = 165, Backtracks: 0
Iteration 16: p = 166, Backtracks: 624
Iteration 17: p = 167, Backtracks: 0
Iteration 18: p = 168, Backtracks: 0
Iteration 19: p = 169, Backtracks: 1228
Iteration 20: p = 170, Backtracks: 0
Iteration 21: p = 171, Backtracks: 0
Iteration 22: p = 172, Backtracks: 6157
Iteration 23: p = 173, Backtracks: 0
Iteration 24: p = 174, Backtracks: 0
Iteration 25: p = 175, Backtracks: 20355
Iteration 26: p = 176, Backtracks: 0
Iteration 27: p = 177, Backtracks: 0
Iteration 28: p = 178, Backtracks: 66405
Iteration 29: p = 179, Backtracks: 0
Iteration 30: p = 180, Backtracks: 0
Iteration 31: p = 181, Backtracks: 16779
Iteration 32: p = 182, Backtracks: 0
Iteration 33: p = 183, Backtracks: 0
Iteration 34: p = 184, Backtracks: 688717
Iteration 35: p = 185, Backtracks: 0
Iteration 36: p = 186, Backtracks: 0
Iteration 37: p = 187, Backtracks: 2240469
Iteration 38: p = 188, Backtracks: 0
Iteration 39: p = 189, Backtracks: 0
Iteration 40: p = 190, Backtracks: 7188280
Iteration 41: p = 191, Backtracks: 0
Iteration 42: p = 192, Backtracks: 0
Iteration 43: p = 193, Backtracks: 545889

Iteration 44: p = 194, Backtracks: 0
Iteration 45: p = 195, Backtracks: 0
Iteration 46: p = 196, Backtracks: 70230095
Iteration 47: p = 197, Backtracks: 0
Iteration 48: p = 198, Backtracks: 0
Iteration 49: p = 199, Backtracks: 232192890
Iteration 50: p = 200, Backtracks: 0

End of log.