AMS-Projekt im WS 2012/13
MASDAR CITY - Personal Rapid Transit
Beispiele für Fahraufträge

I. Boersch, J. Heinsohn

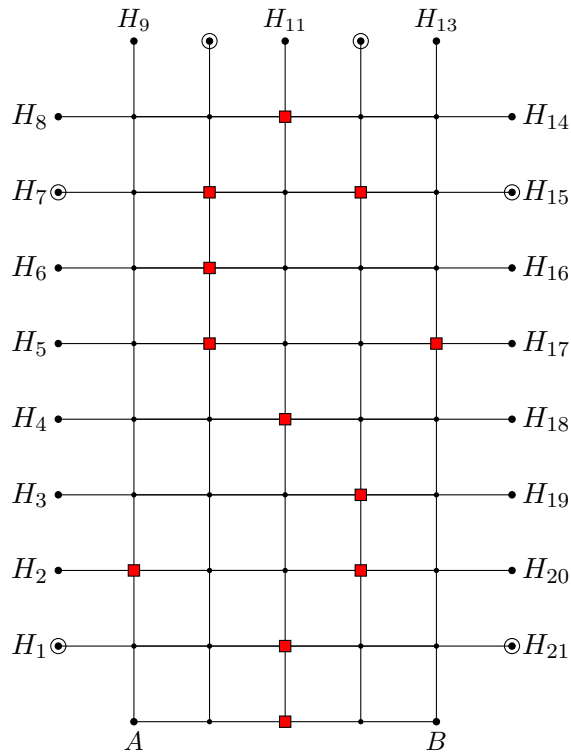# 1 Fahrauftrag F1 - From task description - this should be easy!

Abbildung 1: Fahrauftrag F1 xxFxFxxx..x..xF.x.x.Fx.x...xx.x..xxx..x..xx...x.xxx..x.xF..x..Fx..x..x

configuration usable, but some warnings because of different number of path alternatives

—————————————————-

solution for passenger 1: path: [56, 57, 64], length: 3, rotations: 1, number of paths with length of 3 and perhaps more rotations: 1

solution for passenger 2: path: [14, 15, 22, 29, 36, 43, 44, 51, 58, 65, 64], length: 11, rotations: 5, number of paths with length of 11 and perhaps more rotations: 4

solution for passenger 3: path: [2, 9, 8, 15, 22, 29, 36, 43, 44, 51, 58, 65, 64], length: 13, rotations: 6, number of paths with length of 13 and perhaps more rotations: 4

—————————————————-

solution for passenger 1: path: [62, 61, 68], length: 3, rotations: 1, number of paths with length of 3 and perhaps more rotations: 1

solution for passenger 2: path: [20, 19, 26, 25, 32, 39, 40, 47, 54, 61, 68], length: 11, rotations: 5, number of paths with length of 11 and perhaps more rotations: 1

solution for passenger 3: path: [4, 11, 12, 19, 26, 25, 32, 39, 40, 47, 54, 61, 68], length: 13, rotations: 6, number of paths with length of 13 and perhaps more rotations: 1

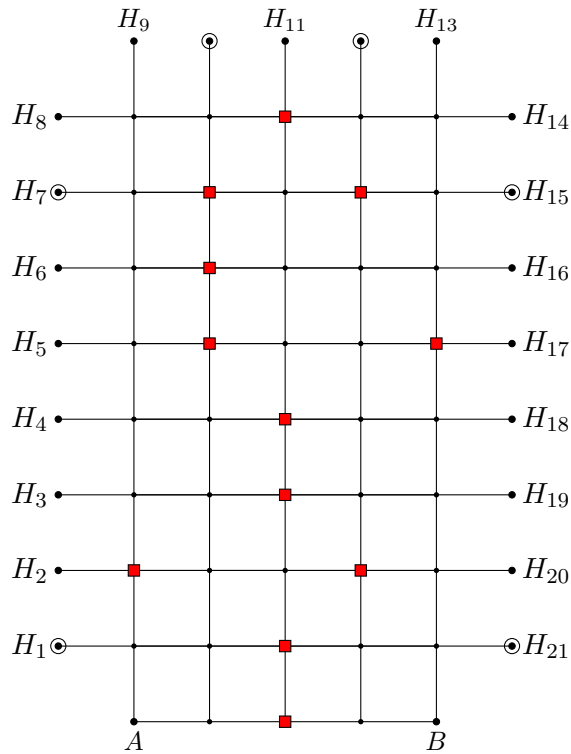# 2 Fahrauftrag F2 - From task description - one crossing modified

Abbildung 2: Fahrauftrag F2 xxFxFxxx..x..xF.x.x.Fx.x...xx.x..xxx..x..xx..x..xxx..x.xF..x..Fx..x..x

configuration usable, but some warnings because of different number of path alternatives

——————————————————-

solution for passenger 1: path: [56, 57, 64], length: 3, rotations: 1, number of paths with length of 3 and perhaps more rotations: 1

solution for passenger 2: path: [14, 15, 22, 29, 36, 43, 44, 51, 58, 65, 64], length: 11, rotations: 5, number of paths with length of 11 and perhaps more rotations: 4

solution for passenger 3: path: [2, 9, 8, 15, 22, 29, 36, 43, 44, 51, 58, 65, 64], length: 13, rotations: 6, number of paths with length of 13 and perhaps more rotations: 4

——————————————————-

solution for passenger 1: path: [62, 61, 68], length: 3, rotations: 1, number of paths with length of 3 and perhaps more rotations: 1

solution for passenger 2: path: [20, 19, 26, 25, 32, 39, 46, 47, 54, 61, 68], length: 11, rotations: 5, number of paths with length of 11 and perhaps more rotations: 2

solution for passenger 3: path: [4, 11, 12, 19, 26, 25, 32, 39, 46, 47, 54, 61, 68], length: 13, rotations: 6, number of paths with length of 13 and perhaps more rotations: 2
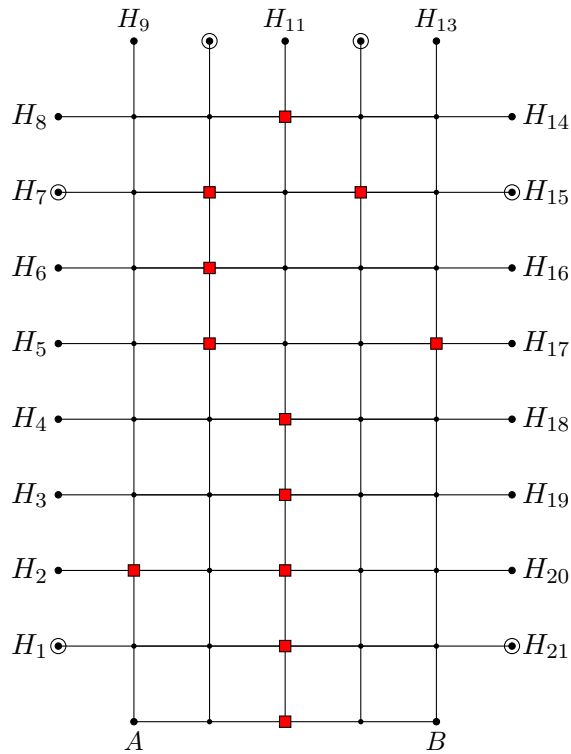
3   Fahrauftrag F3 - City Slalom

Abbildung 3: Fahrauftrag F3 xxFxFxxx..x..xF.x.x.Fx.x...xx.x..xxx..x..xx..x..xxx.x..xF..x..Fx..x..x

configuration usable, but some warnings because of different number of path alternatives

——————————————————-

solution for passenger 1: path: [56, 57, 64], length: 3, rotations: 1, number of paths with length of 3 and perhaps more rotations: 1

solution for passenger 2: path: [14, 15, 22, 29, 36, 43, 44, 51, 58, 65, 64], length: 11, rotations: 5, number of paths with length of 11 and perhaps more rotations: 4

solution for passenger 3: path: [2, 9, 8, 15, 22, 29, 36, 43, 44, 51, 58, 65, 64], length: 13, rotations: 6, number of paths with length of 13 and perhaps more rotations: 4

——————————————————-

solution for passenger 1: path: [62, 61, 68], length: 3, rotations: 1, number of paths with length of 3 and perhaps more rotations: 1

solution for passenger 2: path: [20, 19, 26, 25, 32, 39, 46, 53, 60, 67, 68], length: 11, rotations: 5, number of paths with length of 11 and perhaps more rotations: 5

solution for passenger 3: path: [4, 11, 12, 19, 26, 25, 32, 39, 46, 53, 60, 67, 68], length: 13, rotations: 6, number of paths with length of 13 and perhaps more rotations: 5
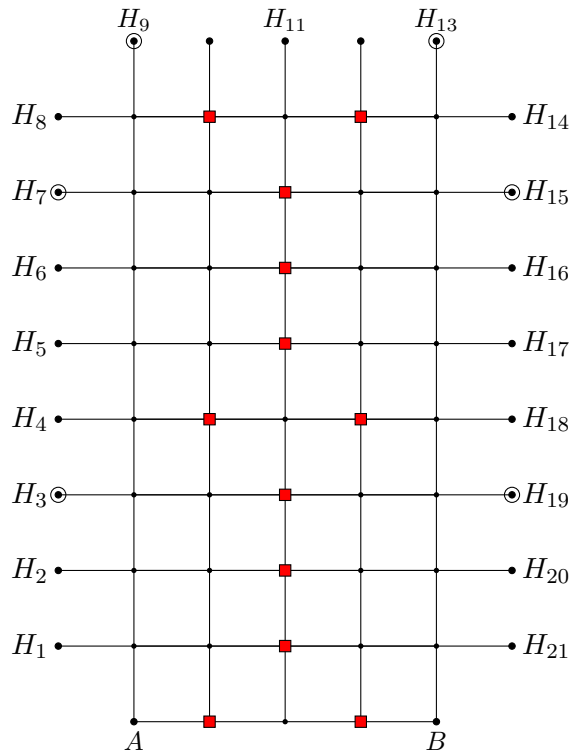
4 Fahrauftrag F4 - Race on the Highway

Abbildung 4: Fahrauftrag F4 xFxxxFxx.x.x.xF..x..Fx..x..xx..x..xx.x.x.xF..x..Fx..x..xx..x..xx.x.x.x

configuration absolut ok

—————————————————-

solution for passenger 1: path: [42, 43, 50, 57, 64], length: 5, rotations: 1, number of paths with length of 5 and perhaps more rotations: 1

solution for passenger 2: path: [14, 15, 22, 29, 36, 43, 50, 57, 64], length: 9, rotations: 1, number of paths with length of 9 and perhaps more rotations: 1

solution for passenger 3: path: [1, 8, 15, 22, 29, 36, 43, 50, 57, 64], length: 10, rotations: 0, number of paths with length of 10 and perhaps more rotations: 1

—————————————————-

solution for passenger 1: path: [48, 47, 54, 61, 68], length: 5, rotations: 1, number of paths with length of 5 and perhaps more rotations: 1

solution for passenger 2: path: [20, 19, 26, 33, 40, 47, 54, 61, 68], length: 9, rotations: 1, number of paths with length of 9 and perhaps more rotations: 1

solution for passenger 3: path: [5, 12, 19, 26, 33, 40, 47, 54, 61, 68], length: 10, rotations: 0, number of paths with length of 10 and perhaps more rotations: 1
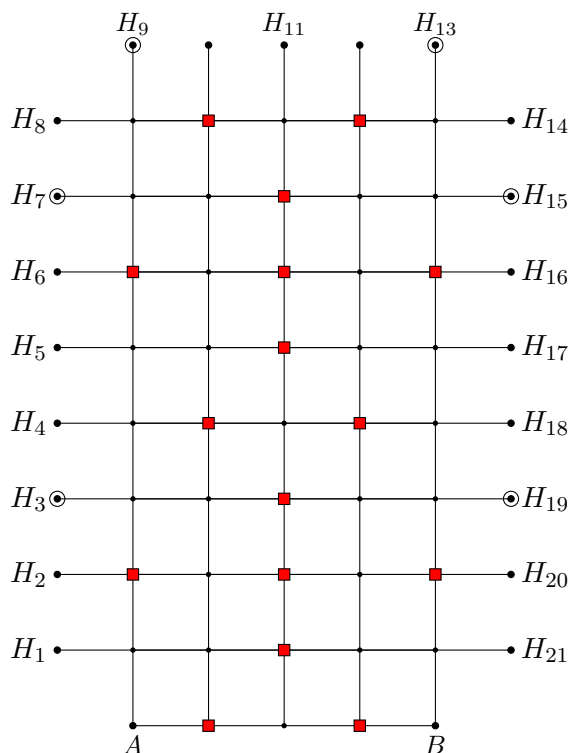
5 Fahrauftrag F5 - Big Slalom

Abbildung 5: Fahrauftrag F5 xFxxxFxx.x.x.xF..x..Fxx.x.xxx..x..xx.x.x.xF..x..Fxx.x.xxx..x..xx.x.x.x

configuration absolut ok

solution for passenger 1: path: [42, 43, 44, 51, 58, 57, 64], length: 7, rotations: 3, number of paths with length of 7 and perhaps more rotations: 1

solution for passenger 2: path: [14, 15, 16, 23, 30, 29, 36, 43, 44, 51, 58, 57, 64], length: 13, rotations: 7, number of paths with length of 13 and perhaps more rotations: 1

solution for passenger 3: path: [1, 8, 15, 16, 23, 30, 29, 36, 43, 44, 51, 58, 57, 64], length: 14, rotations: 8, number of paths with length of 14 and perhaps more rotations: 1

solution for passenger 1: path: [48, 47, 46, 53, 60, 61, 68], length: 7, rotations: 3, number of paths with length of 7 and perhaps more rotations: 1

solution for passenger 2: path: [20, 19, 18, 25, 32, 33, 40, 47, 46, 53, 60, 61, 68], length: 13, rotations: 7, number of paths with length of 13 and perhaps more rotations: 1

solution for passenger 3: path: [5, 12, 19, 18, 25, 32, 33, 40, 47, 46, 53, 60, 61, 68], length: 14, rotations: 8, number of paths with length of 14 and perhaps more rotations: 1
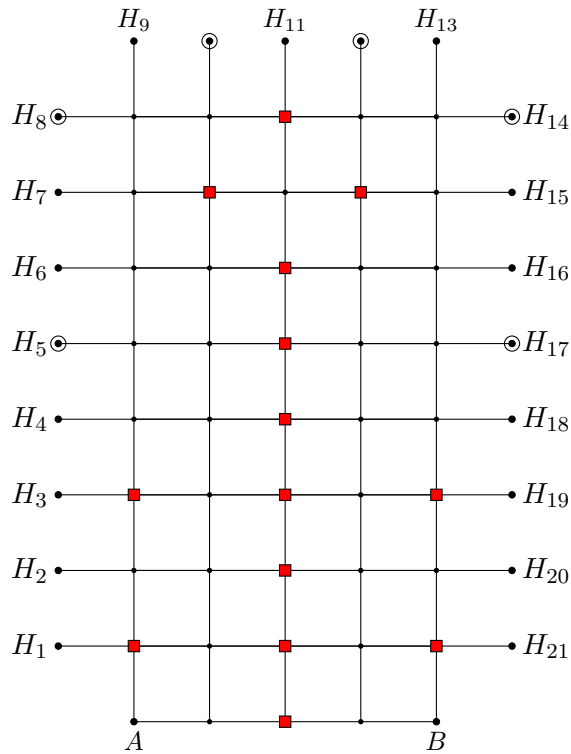
6 Fahrauftrag F6 - Symmetry

Abbildung 6: Fahrauftrag F6 xxFxFxxF..x..Fx.x.x.xx..x..xF..x..Fx..x..xxx.x.xxx..x..xxx.x.xxx..x..x

configuration absolut ok

―――――――――――――――――-

solution for passenger 1: path: [28, 29, 30, 37, 44, 51, 58, 65, 64], length: 9, rotations: 3, number of paths with length of 9 and perhaps more rotations: 2

solution for passenger 2: path: [7, 8, 15, 22, 29, 36, 37, 44, 51, 58, 65, 64], length: 12, rotations: 5, number of paths with length of 12 and perhaps more rotations: 3

solution for passenger 3: path: [2, 9, 8, 15, 22, 29, 36, 37, 44, 51, 58, 65, 64], length: 13, rotations: 6, number of paths with length of 13 and perhaps more rotations: 3

―――――――――――――――――-

solution for passenger 1: path: [34, 33, 32, 39, 46, 53, 60, 67, 68], length: 9, rotations: 3, number of paths with length of 9 and perhaps more rotations: 2

solution for passenger 2: path: [13, 12, 19, 26, 33, 40, 39, 46, 53, 60, 67, 68], length: 12, rotations: 5, number of paths with length of 12 and perhaps more rotations: 3

solution for passenger 3: path: [4, 11, 12, 19, 26, 33, 40, 39, 46, 53, 60, 67, 68], length: 13, rotations: 6, number of paths with length of 13 and perhaps more rotations: 3
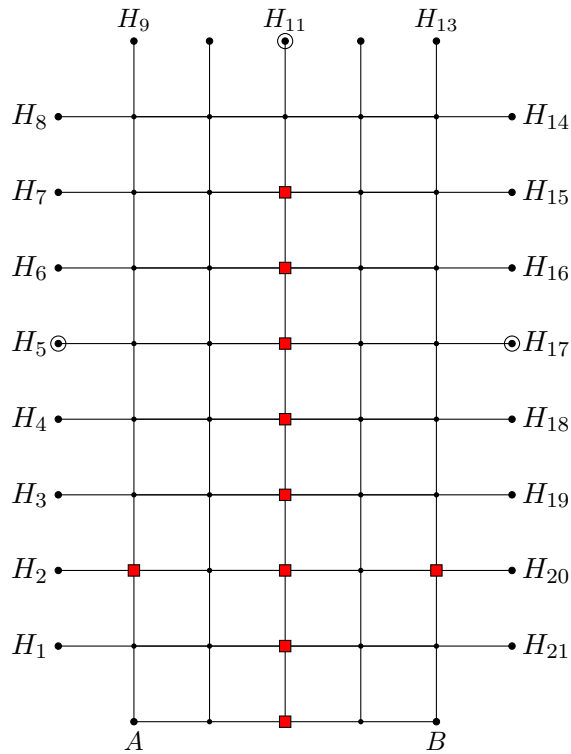
7 Fahrauftrag F7 - Connected Game

Abbildung 7: Fahrauftrag F7 xxxFxxxx.....xx..x..xx..x..xF..x..Fx..x..xx..x..xxx.x.xxx..x..xx..x..x

configuration absolut ok

——————————————————-

solution for passenger 1: path: [28, 29, 30, 37, 44, 51, 58, 65, 64], length: 9, rotations: 3, number of paths with length of 9 and perhaps more rotations: 6

solution for passenger 2: path: [3, 10, 9, 16, 23, 30, 37, 44, 51, 58, 65, 64], length: 12, rotations: 4, number of paths with length of 12 and perhaps more rotations: 2

solution for passenger 3: path: [34, 33, 26, 19, 12, 11, 10, 9, 16, 23, 30, 37, 44, 51, 58, 65, 64], length: 17, rotations: 5, number of paths with length of 17 and perhaps more rotations: 8

——————————————————-

solution for passenger 1: path: [34, 33, 32, 39, 46, 53, 60, 67, 68], length: 9, rotations: 3, number of paths with length of 9 and perhaps more rotations: 6

solution for passenger 2: path: [3, 10, 11, 18, 25, 32, 39, 46, 53, 60, 67, 68], length: 12, rotations: 4, number of paths with length of 12 and perhaps more rotations: 2

solution for passenger 3: path: [28, 29, 22, 15, 8, 9, 10, 11, 18, 25, 32, 39, 46, 53, 60, 67, 68], length: 17, rotations: 5, number of paths with length of 17 and perhaps more rotations: 8
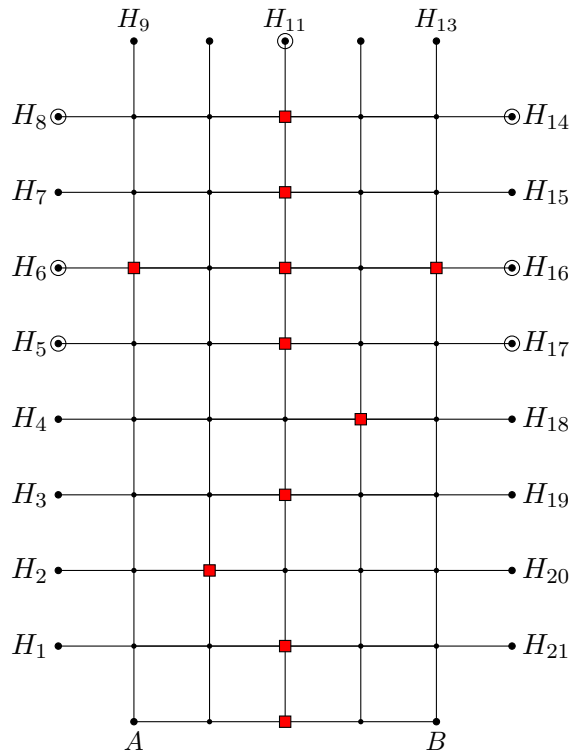
8 Fahrauftrag F8 - Blocked Passengers

Abbildung 8: Fahrauftrag F8 xxxFxxxF..x..Fx..x..xFx.x.xFF..x..Fx...x.xx..x..xx.x...xx..x..xx..x..x

configuration usable, but some warnings because of different number of path alternatives

————————————————-

solution for passenger 1: path: [28, 29, 36, 43, 50, 57, 64], length: 7, rotations: 1, number of paths with length of 7 and perhaps more rotations: 1

solution for passenger 2: path: [7, 8, 9, 16, 23, 30, 37, 44, 43, 50, 57, 64], length: 12, rotations: 3, number of paths with length of 12 and perhaps more rotations: 6

————————————————-

solution for passenger 1: path: [34, 33, 40, 47, 54, 61, 68], length: 7, rotations: 1, number of paths with length of 7 and perhaps more rotations: 1

solution for passenger 2: path: [13, 12, 11, 18, 25, 32, 33, 40, 47, 54, 61, 68], length: 12, rotations: 3, number of paths with length of 12 and perhaps more rotations: 2
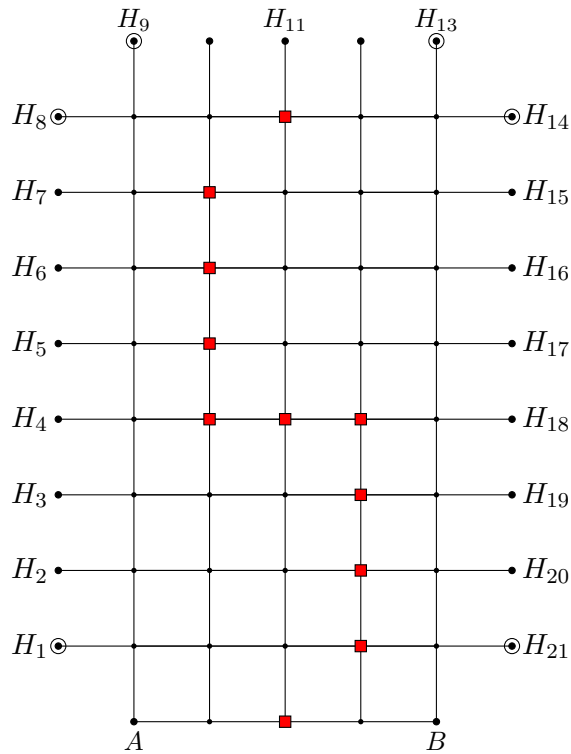
9 Fahrauftrag F9 - Outdoor - Free Land

Abbildung 9: Fahrauftrag F9 xFxxxFxF..x..Fx.x...xx.x...xx.x...xx.xxx.xx...x.xx...x.xF...x.Fx..x..x

configuration absolut ok

——————————————————-

solution for passenger 1: path: [56, 57, 64], length: 3, rotations: 1, number of paths with length of 3 and perhaps more rotations: 1

solution for passenger 2: path: [1, 8, 15, 22, 29, 36, 43, 50, 57, 64], length: 10, rotations: 0, number of paths with length of 10 and perhaps more rotations: 1

solution for passenger 3: path: [7, 8, 15, 22, 29, 36, 43, 50, 57, 64], length: 10, rotations: 1, number of paths with length of 10 and perhaps more rotations: 1

——————————————————-

solution for passenger 1: path: [62, 61, 68], length: 3, rotations: 1, number of paths with length of 3 and perhaps more rotations: 1

solution for passenger 2: path: [5, 12, 19, 26, 33, 40, 47, 54, 61, 68], length: 10, rotations: 0, number of paths with length of 10 and perhaps more rotations: 1

solution for passenger 3: path: [13, 12, 19, 26, 33, 40, 47, 54, 61, 68], length: 10, rotations: 1, number of paths with length of 10 and perhaps more rotations: 1
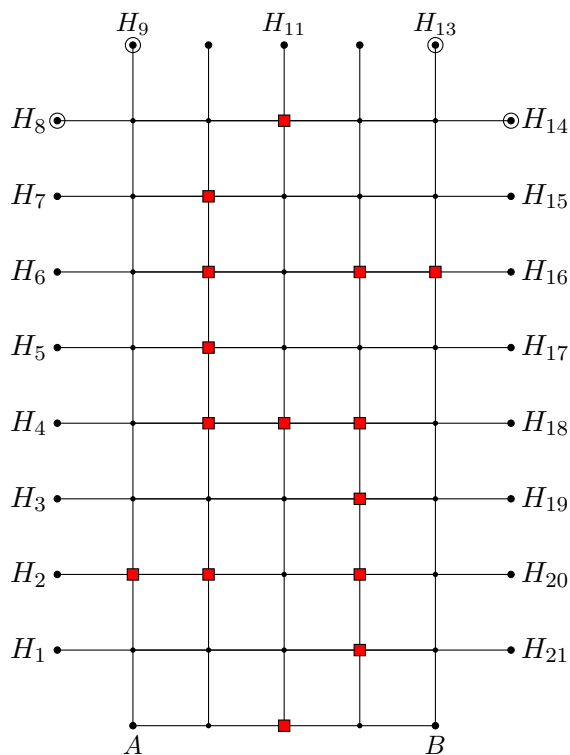
10 Fahrauftrag F10 - Long Distance - Endurance

Abbildung 10: Fahrauftrag F10 xFxxxFxF..x..Fx.x...xx.x.xxxx.x...xx.xxx.xx...x.xxxx.x.xx...x.xx..x..x

configuration absolut ok

————————————————-

solution for passenger 1: path: [1, 8, 15, 22, 29, 36, 43, 44, 45, 52, 59, 58, 57, 64], length: 14, rotations: 4, number of paths with length of 14 and perhaps more rotations: 2

solution for passenger 2: path: [7, 8, 15, 22, 29, 36, 43, 44, 45, 52, 59, 58, 57, 64], length: 14, rotations: 5, number of paths with length of 14 and perhaps more rotations: 2

————————————————-

solution for passenger 1: path: [5, 12, 19, 18, 17, 24, 31, 32, 33, 40, 47, 54, 61, 68], length: 14, rotations: 4, number of paths with length of 14 and perhaps more rotations: 2

solution for passenger 2: path: [13, 12, 19, 18, 17, 24, 31, 32, 33, 40, 47, 54, 61, 68], length: 14, rotations: 5, number of paths with length of 14 and perhaps more rotations: 2
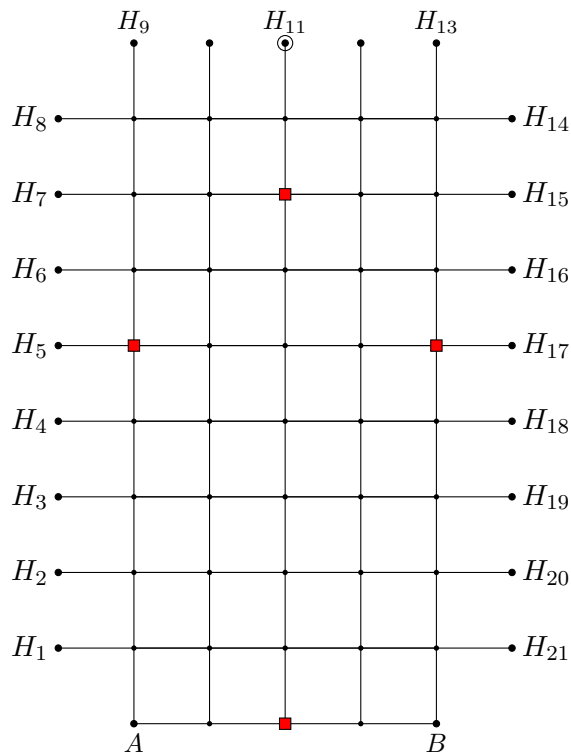
11 Fahrauftrag F11 - VIP

Abbildung 11: Fahrauftrag F11 xxxFxxxx.....xx..x..xx.....xxx...xxx.....xx.....xx.....xx.....xx..x..x

configuration absolut ok

——————————————-

solution for passenger 1: path: [3, 10, 9, 16, 23, 30, 37, 44, 51, 58, 65, 64], length: 12, rotations: 4, number of paths with length of 12 and perhaps more rotations: 5

——————————————-

solution for passenger 1: path: [3, 10, 11, 18, 25, 32, 39, 46, 53, 60, 67, 68], length: 12, rotations: 4, number of paths with length of 12 and perhaps more rotations: 5
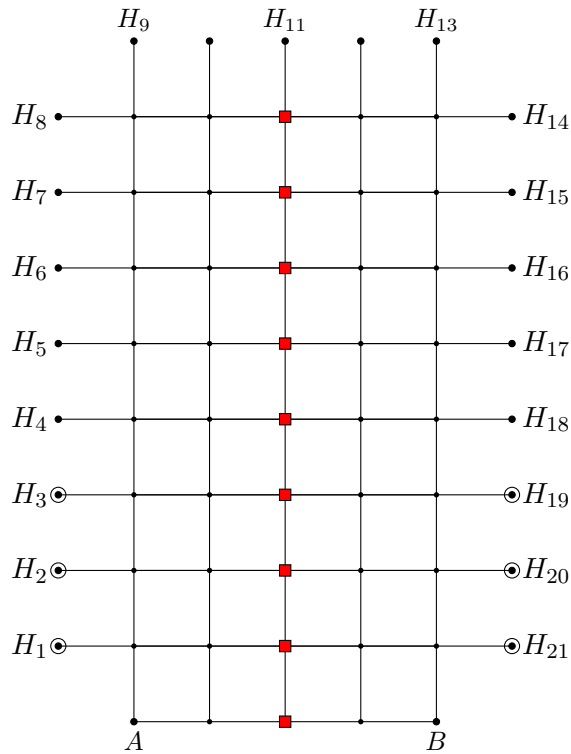
12 Fahrauftrag F12 - Lazy Passengers

Abbildung 12: Fahrauftrag F12 xxxxxxxxx..x..xx..x..xx..x..xx..x..xx..x..xF..x..FF..x..FF..x..Fx..x..x

configuration absolut ok

————————————————-

solution for passenger 1: path: [56, 57, 64], length: 3, rotations: 1, number of paths with length of 3 and perhaps more rotations: 1

solution for passenger 2: path: [49, 50, 57, 64], length: 4, rotations: 1, number of paths with length of 4 and perhaps more rotations: 1

solution for passenger 3: path: [42, 43, 50, 57, 64], length: 5, rotations: 1, number of paths with length of 5 and perhaps more rotations: 1

————————————————-

solution for passenger 1: path: [62, 61, 68], length: 3, rotations: 1, number of paths with length of 3 and perhaps more rotations: 1

solution for passenger 2: path: [55, 54, 61, 68], length: 4, rotations: 1, number of paths with length of 4 and perhaps more rotations: 1

solution for passenger 3: path: [48, 47, 54, 61, 68], length: 5, rotations: 1, number of paths with length of 5 and perhaps more rotations: 1