Diagram

Description automatically generated

Using MRV, DH and LCV

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | X1 | X2 | X3 | X4 | X5 | X6 | X7 | X8 |
| 0 | MRV = 3  DH = 2 | MRV = 3  DH = 3 | MRV = 3  DH = 6 | MRV = 3  DH = 3 | MRV = 3  DH = 4 | MRV = 3  DH = 4 | MRV = 3  DH = 3 | MRV = 3  DH = 3 |
| 1 | MRV = 2 (R, Y)  DH = 1 | MRV = 2  (R, Y)  DH = 2 |  | MRV = 2  (R, Y)  DH = 2 | MRV = 2  (R, Y)  DH =3 | MRV = 2  (R, Y)  DH = 3 | MRV = 3  DH = 3 | MRV = 2  (R, Y)  DH = 2 |
| 2 | MRV = 2 (R, Y)  DH = 1 | MRV = 2  (R, Y)  DH = 2 |  | MRV = 1  (Y)  DH = 1 |  | MRV = 1  (Y)  DH = 2 | MRV = 2  (B, Y)  DH = 2 | MRV = 2  (R, Y)  DH = 2 |
| 3 | MRV = 2 (R, Y)  DH = 1 | MRV = 2  (R, Y)  DH = 2 |  | MRV = 1  (Y)  DH = 1 |  |  | MRV = 1  (B)  DH = 1 | MRV = 1  (R)  DH = 1 |
| 4 | MRV= 1  (Y)  DH = 0 |  |  | MRV = 1  (Y)  DH = 0 |  |  | MRV = 1  (B)  DH = 1 | MRV = 1  (R)  DH = 1 |
|  |  |  |  |  |  |  |  |  |

Step 0: Choose X3 (max DH). X3 = Blue

Step 1: X5 and X6 is equal. Random choose X5 = Red

Step 2: Choose X6 (max DH min MRV). X6 = Yellow

Step 4: Choose X2 (max DH). X2 = Red

Step 5: X1 = Yellow, X4 = Yellow, X7 = Blue, X8 = Red

Chart, bubble chart

Description automatically generated

Text, letter

Description automatically generated

Text, letter

Description automatically generated

X = {C1, C2, C3, C4, C5} (CX stands for Class X)

D = {PA, PB, PC} (PX stands for Professor X)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Variables | C1 | C2 | C3 | C4 | C5 |
| Domains | PC | PC, PB | PA, PB, PC | PA, PB, PC | PC, PB |

Based on Timetable: Draw constraint and its solution (One in many solutions)

Chart, bubble chart

Description automatically generated