Graph Coloring (contd.)

```
void NextValue (int k)
{
    do
    {
        x[k] = (x[k]+1) % (m+1);
```

e.g. $9 \% 9$

9 are already used ↑   total ↑

// next highest color (it will check already selected colors in circular form so that it can repeat colors

→ It will check 0th color then 1st, 2nd ... and so on.

```
        if (! x[k]) return;        // all colors have
                                    //  been used
        for (int j=1 ; j<=n ; j++)
        {
            if ( G[k][j] && (x[k] == x[j]))
```

break;

reject the color & come out of for loop

edge is there ↑

and have same color ↑

```
        }
        if (j == n+1) return;
```

// value of j will be n+1 iff it has completed for loop fully means criterion function is TRUE & the color is OK so select the color

```
    } while (1);
}
```

↗ try another color