

Multistage Graph(Problem)

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9:32 PM

Multistage Graph :-

```
main()
{
    int stages = 4, min;
    int n = 8;
    int cost[9], d[9], Path[9];
    int c[9][9] = { { 0, 0, 0, 0, 0, 0, 0, 0 },
                    { ... }
    }
    // This is to store all the possible distance from a vertex to
    // other vertex. cost[n] = 0 // Last vertex.
    for (int i = n - 1; i >= 1; i--) // finding cost of
        min = 32767; // remaining vertex.

    for (k = i + 1; k <= n; k++) // considering all the
        if (c[i][k] != 0 && // vertex value greater
            c[i][k] < min) // than current.
            min = c[i][k];
}
```

```

    min = C[i][k] + C[k]; → if cost is < min
    {
        d[i] = k;
    }
    cost[i] = min; → Assigning the minimum.
}
→ starting
P[i] = 1; → ending P[stage] = n;
for (int i = 2; i < stages; i++)
    P[i] = d[P[i-1]]; → To calculate the path to take.
}

```

Cost

0	1	2	3	4	5	6	7	8
19	7	11	12	6	4	5	0	

d

0	1	2	3	4	5	6	7	8
	2	6	6	5	8	8	8	

Path

0	1	2	3	4
	1	2	6	8

1 → 2 → 6 → 8