









$B_i = 1$				
	Examp	ole: 2 p	rocesso	Drs
	R1	R2	R3	L
T1	0.25	0.33	0.25	7
T2	0.33	0.5	0.25	5
T3	0.66	0.5 T1	0.5	1 • Deadline=8
T2 • 12/8/99		OS	•	7 ??



Shortest total path length spanning tree

- Instance: Graph G=(V,E), positive integer bound K.
- Question: Is there a spanning tree T for G such that the sum, over all pairs of vertices u,v in V of the length of the path in T from u to v is no more than K?

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- Relating to John Sung's viewgraphs
- Used in
 - caches embedded in CPUs
 - satellite communications
- Several different ways to construct such codes: we look at one of them: block designs

OS

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<section-header><section-header><list-item><list-item><list-item><list-item><table-row><table-container>











- The first row consists entirely of 1's.
- Rows 2-12: put a 1 in column 0 and 1's in further columns in which the numbers are the numbers in a block of the design and putting 0's in all remaining columnar positions. Rows 13-24 are complements of the first 12 rows.

OS

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0	1	2	3	4	5	6	7	8	9	10	11
1	1	1	1	1	1	1	1	1	1	1	1
1	1	0	1	1	1	0	0	0	1	0	0
1	0	1	0	1	1	1	0	0	0	1	0
1	0	0	1	0	1	1	1	0	0	0	1
1	1	0	0	1	0	1	1	1	0	0	0





Operating systems and aspectoriented programming

- Cross-cutting is a key theme
- How does the working set of a task show up in a program? How can you influence the working set? Most likely will have to modify many classes.
- Working set is an issue that cross-cuts the traditional module structure.

1	12/	8/	9	9

OS

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Aspects in OS • Resource utilization is an issue that crosscuts the traditional module structure. To improve resource utilization, have to change several classes.

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	55	51