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| --- | --- |
| Decision variable of Travel | where,  (dim 1) s = index of place at which travel starts,  (dim 2) e = index of place at which travel ends,  (dim 3) d = day of travel |
| Homebase Starting index | 0 |
| Homebase Ending index | N+1 |
| Indices of travel places | 1, 2, …., N |
| Total number of Days |  |
| Cost of Admission at a place ‘s’ |  |
| Time Factor |  |
| Cost Factor | = cost per gallon /miles per gallon |
| Distance between place ‘s’ and ‘e’ in miles |  |
| Time to spend at place ‘s’ in hrs |  |
| Time value of entering a place ‘s’ on a day ‘d’ |  |
| Minimum miles per hour for traveling |  |
| Objective: Total Visits |  |
| Budget constraint |  |
| In degree out degree match constraint |  |
| Place singularity constraint |  |
| Self-loop constraint |  |
| No path to Source Base or from End Base  (No Invalid Path constraint) |  |
| Time spent Constraint |  |
| Time value continuity Constraint |  |
| Constraint to Start at Homebase |  |
| Constraint to End at Homebase |  |
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