  Assignment 2:

Q . Your son took a vacation through Europe without telling you. When the kid returned from the vacation you asked him where he went. The kid told you: Dad I went to these cities: Amsterdam, Kiev, Zurich, Prague, Berlin, Barcelona.

I used only train as transportation and these were the available tickets:

Paris-Skopje, Zurich-Amsterdam, Prague-Zurich, Barcelona-Berlin, Kiev-Prague, Skopje-Paris, Amsterdam-Barcelona, Berlin-Kiev, Berlin-Amsterdam.

You know that your kid started with Kiev

Write a data structure and algorithm that will give you the route which your son was traveling.

Solution :

Logic: we can achieve a solution by using a linked data structure here we can consider each station as a node, each node contains the current station and the next station, traveling 1 station to another station we will know the traveling status

JavaScript Code :

var head;

class Node {

constructor(val) {

this.data = val;

this.next = null;

}

}

function printListData() {

var n = head;

while (n != null) {

document.write(n.data + " ");

n = n.next;

}

}

var head = new Node('Paris-Skopje');

var second = new Node('Zurich-Amsterdam');

var third = new Node('Prague-Zurich');

var fourth = new Node('Barcelona-Berlin');

var fifth = new Node('Kiev-Prague');

var sixth = new Node('Skopje-Paris');

var seventh = new Node('Amsterdam-Barcelona');

var eighth = new Node('Berlin-Kiev');

var nineth = new Node('Berlin-Amsterdam');

head.next = second;

second.next = third;

third.next = fourth;

fourth.next = fifth;

fifth.next = sixth;

sixth.next = seventh;

seventh.next = eighth;

eighth.next = nineth;

printListData();