

Green Mathematics for Machine Learning

Evolutionary Routes

Lesson 1: Paths and Graphs, Worksheet 1

1) There are five airports

- Abu Dhabi (A)
- Berlin (B)
- Copenhagen (C)
- Dublin (D)
- Edinburgh (E)

A person can fly between Abu Dhabi and Berlin for £120.

A person can fly between Abu Dhabi and Edinburgh for £160.

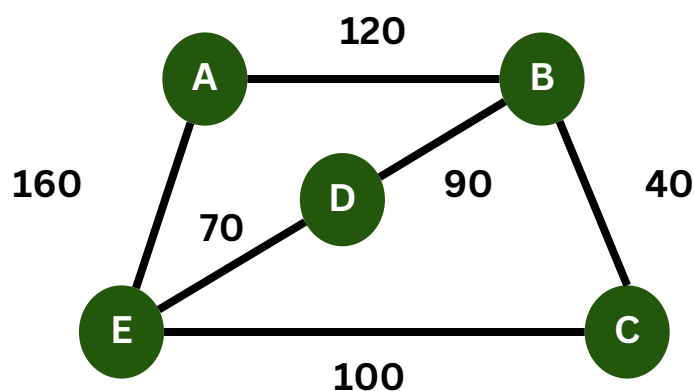
A person can fly between Berlin and Copenhagen for £40.

A person can fly between Berlin and Dublin for £90.

A person can fly between Copenhagen and Edinburgh for £100.

A person can fly between Dublin and Edinburgh for £70.

Draw a graph representing flights between the airports and their costs.



2) Write the adjacency matrix for the airports in (1).

0	120	0	0	160
120	0	40	90	0
0	40	0	0	100
0	90	0	0	70
160	0	100	70	0

3) What is the cheapest path to get from Abu Dhabi to Dublin?

Abu Dhabi > Berlin > Dublin
