

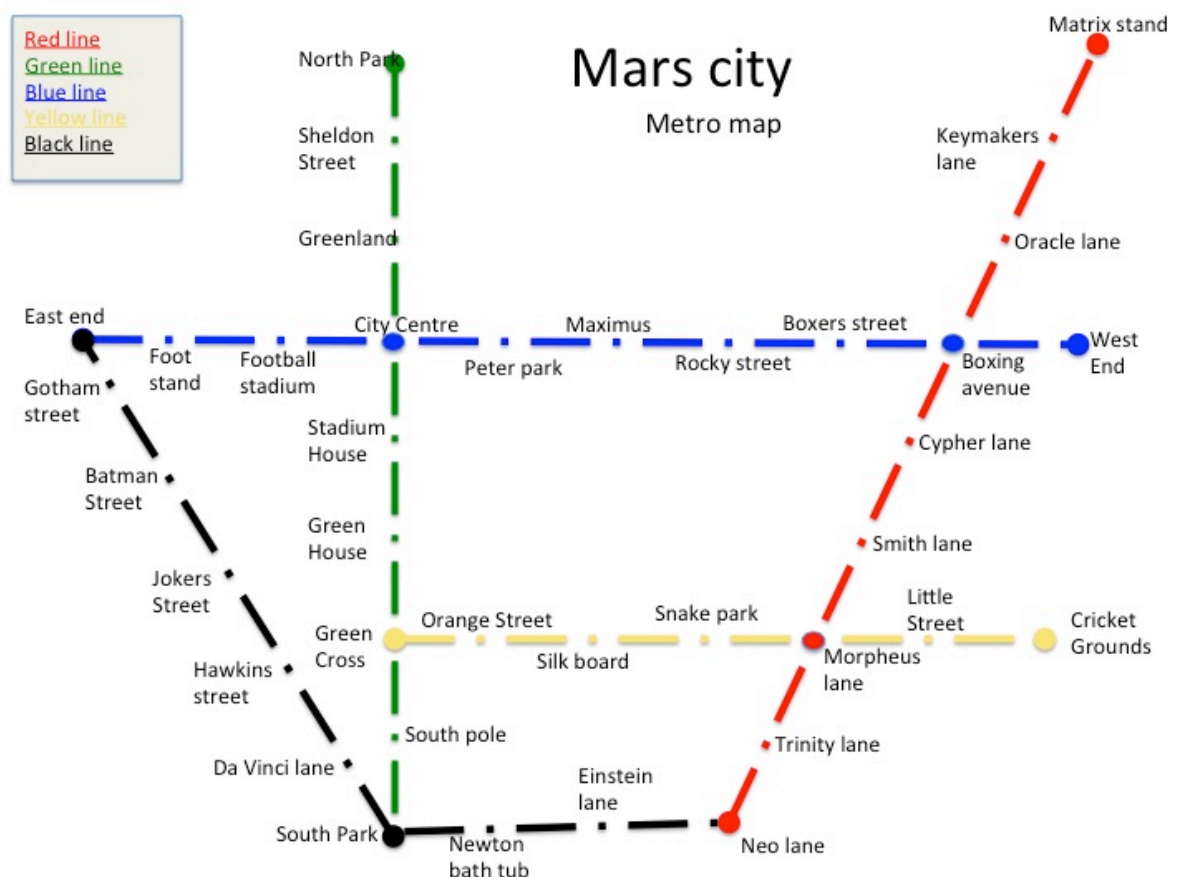
## Easy Metro

Harvey Dent the mayor of Mars city has thrown open the newly built metro lines to the public. The metro connects all prominent places in the city. The metro consists of 5 lanes each indicated by the color as shown in the below map.

The stations are placed exactly 5 minutes away from each other. Ticket cost are calculated as 1\$ for every station to destination (inclusive) and 1\$ at stations where they switch line.

People find it difficult to find the fastest way to reach the destination and the cost of tickets that they need to buy.

Design a mobile application that can help the tech savvy people of the Mars city so that they reach the destination in the minimal possible time and also display the cost.



The metro stations and the lines in order of the stations. Note the train moves in both the directions.

Blue Line – East end, Foot stand, Football stadium, City Centre, Peter Park, Maximus, Rocky Street, Boxers Street, Boxing avenue, West End.

Green Line – North Pole, Sheldon Street, Greenland, City Centre, Stadium House, Green House, Green Cross, South Pole, South Park

Red Line – Matrix Stand, Keymakers Lane, Oracle Lane, Boxing avenue, Cypher lane, Smith lane, Morpheus Lane, Trinity lane, Neo Lane.

Yellow line – Green Cross, Orange Street, Silk Board, Snake Park, Morpheus lane, Little Street, Cricket Grounds

Black line – East end, Gotham street, Batman street, Jokers street, Hawkins street, Da Vinci lane, South Park, Newton bath tub, Einstein lane, Neo lane.

Time between each station is 5 minutes.

Cost of ticket between each station is 1\$.

Switching the line will cost 1\$ extra.

Trains travel in both directions. The directions are identified by the end stations (for example a train moving north in red line is a train moving towards Matrix stand).

### Examples

If I want to travel from East end to Peter Park then

Time it would take –  $5 * 4 = 20$  minutes.

Cost –  $1 * 4 = 4$  \$

Path

Take blue line at East end going through Foot stand, Football stadium, City Centre to reach at City Centre.

If I want to travel from Green Cross to Neo Lane.

Time it would take =  $5 * 5 = 25$  minutes.

Cost =  $5 * 1 + 1$  (line change) = 6\$.

Path

Take green line at Green cross moving towards south park, at south park change to black line and move towards Neo lane.

If you want to travel from Stadium house to East end

Time -  $4 * 5 = 20$  mins

Cost –  $4 * 1 + 1$  (line change at City centre) = 5\$

Path

Take green line at Stadium House moving towards North Park. Get down at City centre and take Blue line moving towards East end.