

Your task is to build a simple **trip planner** application.

It stores **locations**, which all have the following common attributes: X and Y **coordinates**.

All locations are divided into the following subcategories:

- **Landmark**: This has a **name**. Its coordinates can only be set once. And they have an **entrance fee** that can be set multiple times with a validation for negative values

- **City**: This object also has a **name**. Its coordinates can only be set once. Also it needs a method that **returns all the landmarks** in a 50km area.

- **UserLocation**: The current location of the user. Also this object **stores the coordinates** every time it is set and can return them to **show** the user his/her **location history**.

Furthermore every location has a method that can return the **closest city** to it. Implement the above in an OOP way!

Note: You can assume that the earth is flat, i.e. there is no need to wrap around coordinates.