THE TASK:

Company birthday guests

We have some partners records in the text below - one partner per line, JSON lines formatted. We want to invite any partner within 100km of our Sofia office for our company's birthday celebration. Write a program that will read the full list of partners and output the names and partners ids of matching partners (within 100 km.), sorted by Partner ID (ascending).

- You can use the first formula from this Wikipedia article: https://en.wikipedia.org/wiki/Great-circle_distance to calculate distance.
- Don't forget, you'll need to convert degrees to radians.
- The GPS coordinates for our Sofia office are 42.6665921, 23.351723
- You can find the Partners list HERE or below if the link doesn't work.
- We are looking for you to produce working code, with enough room to demonstrate how to structure components in a small program.
- Poor answers will be in the form of one big function. It's impossible to test anything smaller than the entire operation of the program, including reading from the input file. Errors are caught and ignored.
- Good answers are well-composed. Calculating distances and reading from a file are separate concerns. Classes or functions have clearly defined responsibilities. Test cases cover likely problems with input data.
- It is an excellent answer if we've learned something from reading the code.
- We recommend you use whatever language you feel strongest in. It does not have to be one we use!

*** Please submit code as if you intended to ship it to production. The details matter. Tests are expected, as is well written, simple idiomatic code. Please include the output of your program with your code.**

Partners list:

{"latitude": "42.6661417", "partner_id": 12, "name": "Bluebell Robles", "longitude": "23.293435"}
{"latitude": "42.7034111", "partner_id": 1, "name": "Jamelia Waller", "longitude": "23.4862259"}
{"latitude": "42.1268151", "partner_id": 2, "name": "Devon Mac", "longitude": "24.7234766"}
{"latitude": "42.6264989", "partner_id": 3, "name": "Gracie-Leigh Mccallum", "longitude": "23.4097679"}
{"latitude": "42.6048396", "partner_id": 28, "name": "Romy Harrison", "longitude": "23.4793636"}
{"latitude": "41.9279411", "partner_id": 7, "name": "Lorna Montgomery", "longitude": "25.9083249"}
{"latitude": "42.7047197", "partner_id": 8, "name": "Ffion Firth", "longitude": "23.395183"}
{"latitude": "41.5295527", "partner_id": 26, "name": "Jayden-James Rawlings", "longitude": "25.4113927"}
{"latitude": "42.6049054", "partner_id": 27, "name": "Francisco Fleming", "longitude": "23.0519972"}
{"latitude": "42.7724527", "partner_id": 6, "name": "Jodie Dyer", "longitude": "23.3558937"}
{"latitude": "42.6634102", "partner_id": 9, "name": "Billie-Jo Dunlap", "longitude": "23.2681108"}
{"latitude": "42.7242457", "partner_id": 10, "name": "Sachin Chan", "longitude": "23.2441588"}
{"latitude": "42.6893403", "partner_id": 4, "name": "Lorelei Compton", "longitude": "27.7060827"}
{"latitude": "42.2676642", "partner_id": 5, "name": "Margot Mckay", "longitude": "23.6067589"}
{"latitude": "42.6612057", "partner_id": 11, "name": "Una Beach", "longitude": "23.4147793"}
{"latitude": "43.2232383", "partner_id": 31, "name": "Nadia Danabasheva", "longitude": "27.8828709"}
{"latitude": "43", "partner_id": 13, "name": "Nur Combs", "longitude": "24"}
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{"latitude": "42.8192476", "partner_id": 15, "name": "Oliwia Trujillo", "longitude": "27.881862"}
{"latitude": "42.6405549", "partner_id": 16, "name": "Maddy Novak", "longitude": "23.3344239"}
{"latitude": "42.6545333", "partner_id": 17, "name": "Kodi Collier", "longitude": "23.4078409"}
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{"latitude": "42.8182819", "partner_id": 24, "name": "Rada Ilieva", "longitude": "23.3608871"}
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{"latitude": "42.7232749", "partner_id": 20, "name": "Oscarbait Crackersprout", "longitude": "23.2586465"}
{"latitude": "42.7074332", "partner_id": 21, "name": "Bendydick Chickenstrips", "longitude": "23.1480301"}
{"latitude": "42.8884016", "partner_id": 22, "name": "Billybong Clombyclomp", "longitude": "24.7147034"}
{"latitude": "42.4229411", "partner_id": 29, "name": "Wellington Crackerjack", "longitude": "25.6399245"}
{"latitude": "42.6479375", "partner_id": 30, "name": "Bunsenburner Crumplehorn", "longitude": "23.2782796"}
{"latitude": "43.2023394", "partner_id": 23, "name": "Buckminster Fullerene", "longitude": "27.9086398"}
{"latitude": "42.6604717", "partner_id": 25, "name": "Bombadil Rivendell", "longitude": "23.4641794"}