Hello teams,

Greetings from IIT Roorkee,

Congratulations on qualifying for the 2nd round of Alankan '17—Data analytics competition by IIT R.

The second round consists of a case study that will need participants to arrive at a decision by applying their analytical skills.

Instructions for the second round are as follows:

1. Your submission should contain
   - Powerpoint Presentation (.ppt or .pptx), containing a maximum of 10 slides excluding the title slide and Thank you page.
   - Your **registered team name** and **participant names, Cogni ID** on the first slide of your PPT.
   - Data file [optional] in formats like .xls, .csv, etc.
2. Naming convention for the PPT and data file: **teamname_collegename**
3. Make necessary assumptions wherever required. However, major assumptions should be clearly stated in your presentation file.
4. The solutions should be sent from the registered email ID of the team leader
5. Submission deadline is **15th March 2017, 23:59 (IST).**
6. The third round is an on-campus presentation round**.** Details of the third round will be mailed to teams that qualify in the second round.
7. The decision of the evaluators will be final and binding.

Scroll down for the problem statement.

All the best!

Problem statement

MyBusiness Group is a conglomerate present in various fields of business. MyBusiness has named its to-be launched insurance venture as **SecureMe Insurance**. The new venture is getting ready to enter the Indian market and is in prime stage of its launch.

There are factors that affect the premium of insurance to be charged to consumers. The factors vary from consumer's age to health habits, location of residence to gender, job type to workplace, etc. SecureMe Insurance has identified 5 states as potentially good starting points for its business. SecureMe Insurance has procured data of the population of some important cities in these states. This data is segregated based on few variables such as age, type of employment, type of location, and gender that will help them make rational decisions.

You have been hired as a consultant for SecureMe Insurance. Your assignment consists of two major tasks. First, to devise a formula or algorithm that lets SecureMe Insurance calculate the following based upon various variables available in the data:

i. Purchasing power of people for insurance products of each region
ii. Risk factor for the payment of insurance premium of each region

Example: Risk Rate = X * (Age) + Y * (State) + Z * (City) + ……

Weights assigned to each variable should be thoughtful and as close to real world as possible. You can model weights depending upon facts of real world.

The advertising cost of SecureMe Insurance's products is proportional to the population of an area. This has led the company to enter insurance business with an experimental strategy. It has decided to focus on geographical areas that offer higher return on investment (RoI) than areas with higher revenues.

Your second task is to identify areas and states that will give higher RoI to SecureMe Insurance after considering the population, buying potential, and risk factor not just for today but over the next two decades starting present day. For your ease, evaluation of RoI will be done at every 10 years, that is, three times—one in the present day, the next after 10 years, and the last one after 20 years from now.