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|  |  | Clinical trial  nottingham Varsity challenge 2017  Nunc viverra imperdiet enim. Fusce est. Vivamus a tellus.  Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Proin pharetra nonummy pede. Mauris et orci.  Randomisation |  |
|  | Before taking part in a clinical trial, participants are often divided into two or more treatment groups in order to assess the effectiveness of experimental medicinal products against other products or a placebo.  These treatment groups are often blinded – which means that neither the patients, nor the doctors can know which medication the patient is taking. This ensures a fair analysis of the data.  These groupings need to take into account some demographic critera, such as gender and age, in order to produce the fairest results.  Case Study  Study PXL1 is testing a new hair loss treatment. It has 200 patients and 25 sites. Each patient is assigned to a site (e.g. a specific clinic). PXL1 is a blinded trial. Neither the patient nor the doctor, know which treatment is being taken.  Primary Task  Create a solution that divides the participants in the given data set into two equally sized treatment groups and allocates a site to each patient. Sites should have the same number of patients assigned to them.  Present the results of your solution to everyone. The two randomised groups should have the same proportions of males to females, and smokers/non-smokers.  Using any chosen programming language or software tool you may generate any additional dataset you require.  Secondary Task  Adapt your solution to allow ***n*** number of treatment groups of different sizes. Present examples of how your solution handles these.  For example:  3 treatments with patients in a ratio of 2:2:1  4 treatments with patients in a ratio of 4:3:2:1  Stretch Goals  Adapt your soluton to allow different criteria to group by. For example:  All sample data is generated for the purposes of this challenge, and does not represent any real participants involved in any clinical trial.  The data remains the property of PAREXEL and is not to be shared with anybody outside of this challenge.   * Same proportions of – Smokers, Height, Weight * Same proportions of – Age, Weight, Gender   Also consider improvements to the general performance and robustness of your solution. |  |