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| **Exercise** | NaiveRPG |
| **Solutions** | NaiveRPG |
| **Purpose** | Find opportunities to apply various programming elements to impro­ve the struc­ture of an application. |
| **Description** | The **NaiveRPG** project contains seven classes, which fall into three categories:   * Game participants: **Character**, **Bear** and **Troll**. * Game items: **Boots**, **Sword** and **Shield**. * Game simulator: **Game**   The application does implement an extremely simple Role-Playing Game (RPG), but it has a very inflexible structure. |
| **Steps** | 1. Investigate the classes mentioned above, until you have a reasonable understanding of all the classes. Most classes are quite simple. 2. Next, focus on the **Run** method in the **Game** class. It imple­ments the “game engine”, i.e. it is intended to manage the general progres­sion of the game. In its current form, the method is however very inflexi­ble, and running the game will produce the same result over and over, since the setup (participants and items) is always the same, and cannot be changed unless the method itself is updated. 3. Use your current knowledge about Object-Oriented C# Pro­gram­ming and your common sense to improve the structure of the imple­mentation. The goal should be to make the **Run** method as flexible as possible, i.e. it should be as independent as possible with regards to spe­cific participants, items, combat mechanics, etc.. You are free to change the structure of the application in any way you want; this could e.g. be by using inheritance, defining interfaces, adding properties to classes, adding parameters to methods, etc.. 4. Once you feel that the structure has been sufficiently improved, feel free to add additional elements to the game, e.g. additional game items and participants, or perhaps completely new game elements like e.g. weapon enhancements or more advanced combat mechanics. 5. **Keep going!** This is an open-ended exercise, so keep adding interesting elements and structures to the application. |