isolutions

Assessment Grill Master

Conditions

Please solve this task within one week. It should take you 2 to 4 hours. Send the source code (Visual Studio project incl. CS files), compressed as ZIP file, to your contact at isolutions.

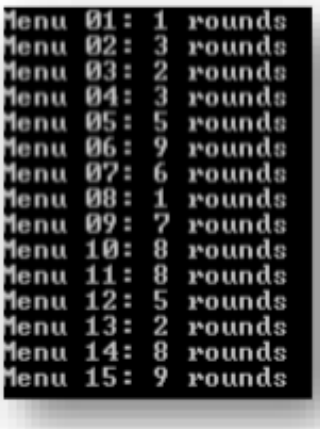
The solution should be written in .NET / C#. It's also possible to write it in Java, JavaScript or any other common programming language.

Scope

Help our master barbecue chef to optimize order in which barbecue items are grilled. Since the space on the grill is limited and different grill items have different sizes, you need to calculate the optimal schedule for grilling. The aim is to optimize the time for barbecuing the entire menu. The grill measures 20cm x 30cm. The cooking time is the same for all barbecue items.

A REST API provides you with different grill menus. The service returns a list of different pieces of meat with the required space. Your solution calculates the order in which the food is placed on the grill and at the same time optimizes the duration of the entire meal. The console displays how many rounds are needed to grill the entire menu.

Our REST API service provides you with different menus so that you can test your software with different configurations. The solution should be implemented generically and output the rounds for each grill menu. The output could look like this:



Also, the sum of the grill rounds of all menus must be displayed.

REST API Service provides the following entities:

- GrillMenus:16 different BBQ menus
- GrillMenuItems: various grilled goods including size (length x width)
- GrillMenuItemQuantities: Number of grilled products per menu

In the evaluation we will look at the following points:

- Code Quality
- Algorithm
- Sustainability and readability of the source code
- Documentation of the source code

The user interface won't affect the rating.

Access

REST API	http://isol-grillassessment.azurewebsites.net/swagger/docs/v1
Swagger UI	http://isol-grillassessment.azurewebsites.net/swagger/ui/index

Sample Code

```
class AnonymousCredentials : ServiceClientCredentials
{
    public AnonymousCredentials()
    {
    }
}

static void Main(string[] args)
{
    using (GrillMenuClient client = new GrillMenuClient(new AnonymousCredentials()))
    {
        var results = client.GetAll();
        foreach (var menu in results.OrderBy(r => r.Menu))
        {
            // Cook the menu
        }
    }
}
```