# Background

Acme Ltd provides automated marketing services to thousands of partners. The team is developing a new bulk email messaging system. As part the new system, users on each of the partner websites can update their email preferences. Research has indicated that users are willing to wait up to 24 hours for these changes to take effect. As a result, the decision has been made to make these changes asynchronous. They will be batch updated on a 24 hour basis. This will alleviate pressure on the back-end services and allow the system to scale without performance issues.

# Proposed solution

When users update their email preferences on partner websites, these preferences are stored temporarily in a database on each of the partner’s website. A separate system is already in place to retrieve and merge the lists of user preference updates for each website and place them in a text file in an Azure Blob storage container once daily.

The purpose of this feature is to take the text file that has been dropped into storage and format the information. For now, the objective is to output the correctly formatted data to the command line. In a future feature, this information will be saved to the central user database. The database functionality is out of scope for this assignment.

## Tasks to perform in this assignment

* You will create an Azure Function App that listens for changes to an Azure Blob storage container. A skeleton C# function app is included. Use this as your starting point. More details on setting up an Azure Function App can be found here: https://docs.microsoft.com/en-us/azure/azure-functions/functions-create-your-first-function-visual-studio
* A sample text file has been provided by the product owner. This is included in this folder. It is called user-preferences.txt
* Assume that the headings for this file will be used for all future files. The headings are:
  + UserID (Datatype: GUID)
  + IsUnsubscribed (Datatype: Boolean)
  + AllowMarketingEmails (Datatype: Boolean)
  + AllowMarketingSMS (Datatype: Boolean)
* You will read in the text file (which uses a pipe delimited format)
* You will extract the data from the text file and store it in a data structure better suited for storing
* Sort the objects in this order:
  + IsUnsubscribed = true
  + AllowMarketingEmails = false
  + AllowMarketingSMS = false
* Print the list of sorted objects to the console when the function app runs, in this format:
  + UserID | IsUnsubscribed | AllowMarketingEmails | AllowMarketingSMS
  + 1111-2222-3333-4444 | true | false | false
  + etc.

## Expectations

* Preferred language is C#
* The exercise is estimated to take approximately 4 hours
* If you get stuck on any of the Azure configuration and set-up steps, please ignore any failures here and concentrate on the code-base. Use pseudocode if you run out of time. The purpose of this exercise is to showcase your coding expertise. Don’t get hung up on configuration issues
* The code assignment should contain a high level of code coverage through automated testing. Use tests where appropriate.
* In order for the attached function app solution to work on your local machine, you should create a new blob container in your storage emulator called “dev”. When you run the function locally and add a new text file to this blob container, the function app will fire.

