

**PROJECT TASK 1: DETERMINING SOFTWARE OBLIGATIONS****TASK BRIEF**

- An automated program which captures user messages containing the word 'Subscription' from Slack channels and stores them in a sheet.
- Use .NET/C# for coding.
- Extract entire message text (which matches the above criteria), user name of the member who posted the message and date of message in a sheet.
- Use either Microsoft Excel sheet or Google sheet or Apache open office sheet for storing the output. Refer Slack API Documentation at: <https://api.slack.com/methods>
- The objective of this exercise is to collate all user feedback communicated in Slack channels for the product team so that they can perform further analytics on.

**SOFTWARE REQUIREMENTS SPECIFICATIONS*****Introduction & Purpose***

The *purpose* of this project is to analyse the age segment that consumes the most content on the Better India digital platform to help increase traffic to their website and to determine what articles are being read the most.

This software is intended for the analytics product team at *the Better India* with the intended use of using the results to help achieve optimal consumption of their content by their users. This will be achieved by knowing exactly who their target audience is and what they enjoy reading the most from the platform.

***Product scope***

The *objective* of this project is to collate all user feedback that is communicated in Slack channels for the product team so that they can perform further analytics on.

Extracting the word 'Subscription' from the slack messages sent by users will help determine who the users are and how old they are based on their profiles. With this information, it will reveal who the vast majority of subscribed users are.

***Definitions and Acronyms***

It is important to define the risks in this project and how to mitigate the risks at hand.

Risks involved could be using private information (such as names, date of births or identification numbers) of our users without their consent which could be a hazardous situation. We need to make sure that users are aware and agree to the terms and conditions of providing us with their information and using their information for research or analytics purposes.

***What we will build***

We need to build an automated software program or application that captures the messages of users which contains the word 'Subscription' from Slack channels and then stores the output in a sheet (e.g., Google Sheet, Apache office sheet or Excel Sheet). The output stored in the Google sheet should include the message: 'subscription', name of the user who posted the message on Slack and the date the message was posted.



This software is a new product that will be made for the analytics product team at '*the better India*'. The software program will integrate with the Slack channel ( where data will be extracted) and Google sheets (where output will be stored).

This software integration is needed for the automation of knowing the users posting the word 'subscription' and what date and time they do so. This will give the product team evidence of who these users are and what age segment they are in. Audience will be defined and necessary adjustments can be made to help increase optimal traffic to *the better India* website.

The primary users for this software will be the product team at '*the better India*' as they will be obtaining the data analytics from the software to draw conclusions to benefit their content consumption by users in future.

We are also assuming that technology is a modern tool and will attract more young people to the platform, they are computer-literate and have access to technical devices or smart devices for consistent accessibility to news on the website.

Our project is entirely dependent on user's engagement from previous articles or content on the digital platform. The most engaged content will be shortlisted to factor in who the readers were, what age segment they are and what type of content are they mostly engaging with.

#### ***Tools, software packages, programming languages and techniques to be used***

The programming language that will be used to code is C-sharp/C# and the .NET framework. Visual Studio 2022 will be the code editor of choice used to write our code.

To extract the message 'subscription' from Slack, web-scraping will be used to find and look for the content in the HTML tags and will retrieve the data required. C# supports data extraction of both web-scraping & APIs which makes it capable of fetching data at multiple sites at once.

On, Visual studio 2022, Windows form app (.NET framework version 4.7.2) template is used to create the app. We are only going to use the web-scraping feature in the WinForms App. All code will be written in the Form CS file which is convenient cause the code structure is generated when the project template is created.

NuGet package will be used to fetch data from the website and helps locate and move to the particular node of the data. Install the package HTMLAgilityPack (Open the package NuGet for the solution and search for the package and install in solution).

A sample output of the CSV file with 2 columns on a Google sheet/Excel sheet, one column for the user's name and one with the age of the user.