***Programming Assignment:***

*Reddit, much like other social media platforms, provides a way for users to communicate their interests etc. For this exercise, we would like to see you build an application that listens to your choice of subreddits (best to choose one with a good amount of posts). You can use this*[*link*](https://urldefense.com/v3/__https:/redditcharts.com/__;!!IEG5Mis9EI4d!Q-dJLLvBd_ksfGXNXVkPpxh6RGZ1z3LQKmHKihUNCVlNo9-EMCvM9PZ29V3PaXoo7xMhuWUfHAggJIu2eSF22Oaq$)*to help identify one that interests you.  We'd like to see this as a .NET 6/7 application, and you are free to use any 3rd party libraries you would like.*

*Your app should consume the posts from your chosen subreddit in near real time and keep track of the following statistics between the time your application starts until it ends:*

*Posts with most up votes*

*Users with most posts*

*This description is a little unclear to me – Seems like there are two approaches :*

1. *Only consume posts that are new after my application has started. In this case, these posts will not have many upvotes at the time I consume them. So the statistics won’t mean much unless I go query for updates on the posts I have consumed continually as the application runs. This seems like it could get out of hand? But based on the problem description and extrapolating what I think the use case is, this seems like what I will need to do….*
2. *Since we care about posts with the most upvotes, wouldn’t we want posts with the most upvotes all time? And not just the posts that were created since my application started running? This makes more sense to me, but in this case, the statistics will mostly be static – posts with the most upvotes are sometimes years old and the top 5 all time likely doesn’t change very much especially in the span of a test app like this. For this reason I am going to implement approach A.*

*Your app should also provide some way to report these values to a user (periodically log to terminal, return from RESTful web service, etc.). If there are other interesting statistics you’d like to collect, that would be great. There is no need to store this data in a database; keeping everything in-memory is fine. That said, you should think about how you would persist data if that was a requirement.*

*To acquire near real time statistics from Reddit, you will need to continuously request data from Reddit's rest APIs.  Reddit implements rate limiting and provides details regarding rate limit used, rate limit remaining, and rate limit reset period via response headers.  Your application should use these values to control throughput in an even and consistent manner while utilizing a high percentage of the available request rate.*

*It’s very important that the various application processes do not block each other as Reddit can have a high volume on many of their subreddits.  The app should process posts as concurrently as possible to take advantage of available computing resources. While we are only asking to track a single subreddit, you should be thinking about his you could scale up your app to handle multiple subreddits.*

*While designing and developing this application, you should keep SOLID principles in mind. Although this is a code challenge, we are looking for patterns that could scale and are loosely coupled to external systems / dependencies. In that same theme, there should be some level of error handling and unit testing. The submission should contain code that you would consider production ready.*

*When you're finished, please put your project in a repository on either GitHub or Bitbucket and send us a link. Please be sure to provide guidance as to where the Reddit API Token values are located so that the team reviewing the code can replace/configure the value. After review, we may follow-up with an interview session with questions for you about your code and the choices made in design/implementation.*

*While the coding exercise is intended to be an interesting and fun challenge, we are interested in seeing your best work - aspects that go beyond merely functional code, that demonstrate professionalism and pride in your work.  We look forward to your submission!*

***Accessing the Reddit API***

*To get the API, register*[*here*](https://urldefense.com/v3/__https:/www.reddit.com/wiki/api/__;!!IEG5Mis9EI4d!Q-dJLLvBd_ksfGXNXVkPpxh6RGZ1z3LQKmHKihUNCVlNo9-EMCvM9PZ29V3PaXoo7xMhuWUfHAggJIu2eXOON5Dy$)

*Additional documentation can be found*[*here*](https://urldefense.com/v3/__https:/www.reddit.com/dev/api/__;!!IEG5Mis9EI4d!Q-dJLLvBd_ksfGXNXVkPpxh6RGZ1z3LQKmHKihUNCVlNo9-EMCvM9PZ29V3PaXoo7xMhuWUfHAggJIu2ecEx2w6c$)*.*