**Project Criteria**

* Create a high level flow chart of your program, this should include input, output and decisions that are made. And how your program "flows"
* One of the group members needs to create a Github repository and add the other team members and me to it as collaborators. If you need help with this, Google first, then ask!

**Ideas for project**

* Package logging system
* http://www.cse.msu.edu/~cse231/PracticeOfComputingUsingPython/
* Create a simple timesheet app that records when you type a person’s name and uses the current time to clock them in or out.
* Add a feature to your program to display the elapsed time since a process started, such as a download that uses the requests module. (See [Chapter 11](https://automatetheboringstuff.com/chapter11).)
* Intermittently check how long a program has been running and offer the user a chance to cancel tasks that are taking too long.
* <http://www.danielforsyth.me/exploring_nba_data_in_python/>

**Project Summary**

We want this project to automate some of the repetitive tasks that basketball fans have to continuously do. Let's assume that you are a basketball fan. Our goal is to create a script that will pull together statistics and information about you favorite player or team from a few different sites and present it in a text file and send you an email report after each game of your favorite team with detailed results of the game. The goal is to collect data and make it easy for people to view data to stay updated.

We plan to do this by using the information that we have learned in class, googling questions, and splitting this project in many detailed steps. This project will simplify the lives of many fanatics of basketball. It can be overwhelming to consistently keep track of statistics about players and teams especially for peak season times such as playoffs and March Madness. By creating a script that will contain all this information in one place, it can save on the amount of time and effort spent trying to find it all. For the demonstration, we would start off with a small sample such as the ACC Men’s Basketball Conference comprised of 15 teams.

The code will allow users to input a basketball team and see all of the possible players that play on that team. The user will then type in a name and the output would be the statistics about the player such as their GP, MPG, FGM, FGA and FG, Points per game.  A user can also just input a team name and the output will be the statistics of the team such as their seed, college name, and conference. Information about the team and their games are also available. Once a user is done collecting the data that they need this program will present it in a text file and send you an email report.

**Extra tools**

Sending blue??

Send grade

Smtp library

Include text in file

Don’t attach

Maybe send a text through Sending blue

API that focuses on teams and games

* <https://github.com/Mashape/march-madness-api>
* <https://github.com/dwillis/NCAA-API/blob/master/mbb/scrapers.py>
* programmable web basketball
* <https://github.com/dwillis/NCAA-API>

SMTP API

* <https://github.com/sendgrid/smtpapi-python>
* <http://www.serversmtp.com/en/smtp-api>
* smtplib

**Why We Did Two**

The reason that we decided to take on two projects is because we felt that our initial program for NCAA basketball did not involve enough user interaction. How our project ended up turning out only allowed the user to input their email so that a certain team’s player statistics would be sent to them. We decided to then create a to-do list aside from that project. This program allowed users to input what they needed to take out and add from their to-do list and then it allowed them to input their emails so that their to-do list could be emailed to them.

**Problems**

We faced different problems on both projects. The to-do list we faced less problems, as it was mainly definition based. One of the problems faced was the formatting of the list in the email, but Monique was able to format it so that it had the word To-Do-List on top. For the project that had to do with the NCAA Basketball, it was extremely difficult to find an API for all teams in the ACC and to receive the data on each team. Because of this we had to use APIs for different teams and that gave users the choice to choose between a sample of four teams from the ACC. Because the APIs were set up that way, we made it so that the statistics that each API was given was emailed, but then came the issue of formatting in the email, as well. The many statistics were all jumbled together, where we then had to format it so that it was an html document so that the statistics would come out organized.

**What We Learned**

Through these projects we learned much about collaborating and working on things as a team because through teamwork we were able to help each other. We were able to get a better understand of the use of APIs and at times where we had thought about using a csv file, we learned more about that that meant and how it would be used (even though we ended up using an API). One of the main things that we learned to use was email and it was very useful in adding to our projects that were based on material we had learned, but the use of email allowed us to step out of our comfort zone and delve into new material that could be used within Python.

**The Parts We Did**

Each of us divided the work within the projects. Monique was able to handle the email aspects of both projects and handled the formatting aspects of to-do list when it was emailed. We worked collectively in the to-do list project, and decided on which definitions to do for the project. During the basketball project, Nancy and Sierra both worked on finding an API and creating a code that would allow users to get certain information from the API. Monique also assisted in helping Nancy and Sierra on any problems they ran into. Nancy took care of the problem of formatting that the team ran into when the statistics were emailed. In terms of the flow charts, Nancy helped to create the Basketball one while Monique and Sierra helped with most of the content and with the to-do Sierra helped to create the design and setup of the information while Monique and Nancy helped with the content.