0. Come up with a team name for your group.

The CS Enthusiasts

0. b Please list the names and PIDs of the team members who are present today (or knowingly absent)

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0.c Provide your preliminary project idea (or set of ideas). This is not a commitment to a project.

The Sports Analytics bot.

Using the approved idea for your group's course project, complete the following activities related to requirements analysis.

1. Provide an example of five hypothetical non-functional requirements for this system. Be sure to include the specific type of requirement discussed in class, with each requirement coming from a unique category.

Performance: the bot should be able to relatively quickly give accurate responses

Reliability: the bot should be able to serve multiple requests and many people at the same time all the time

Usability: it should have an easy-to-use interface without much technical setup needed from the user

Supportability: the bot should be able to be easily updated with new players or if players switch teams

Constraints: should be able to run on any device

2. Provide an example of five hypothetical functional requirements for this system.

Predicts sports betting outcomes with decent accuracy. `

Allows for the input of data.

Frontend to easily see results.

A backend that efficiently processes data.

The program should be able to ignore or get rid of bad data.

3. Think of a specific task required to complete each of the functional requirements and non-functional requirements mentioned above (10 total). Estimate the amount of effort needed to complete this task using function points (i.e., using the values here). Briefly explain your answer. (1 low → 10 High)

1. To ensure performance we need to test the response time of requests -2
2. To ensure reliability we would need to test the service while many people are using it-8

3. To ensure suability we would have to let lots of people use the app and then get their feedback on what to improve -4
4. To test usability, we should add and remove players and then see if the data it produces is still accurate -5
5. To ensure that it adheres to the constraints, we should run the program on different types of devices - 7

6. For the accuracy we need to test the expected outcome to the actual - 8
7. A frontend would be necessary to take an input for the project that can move the data to the backend for processing. - 5
8. The frontend needs to be built with special design considerations to make sure it fits in with the project theme. - 6
9. The backend needs to be able to defend against bad input - 8
10. If bad data is present, the program needs to output telling the user that the data needs to be fixed/changed - 5

4. Write three user stories from the perspective of at least two different actors. Provide the acceptance criteria for these stories.

1. Actor: Raptor University, Florida, Football Coach

Name: Steven Michaelson
Experience: 8 Years (Sr. Coach)
I've used a lot of means to track my players. From counting yards to maintaining 2nd down conversions, it is key to keep a track of everyone, including your opponents. All this data exists, but we need a way to manage and process this data. Any functional processed data could make a difference in a game. This creates a space and need for development.

2. Actor: NBA Basketball Player

Name: Joe Russoi
Experience: 15 year Pro
A basketball player and this bot would help them if they can see who might perform the best or worst for a single night. If they can see who might score higher or lower they can base their defense around that. Someone like this might not even need to use the bot to try and make money but to analyze another team.

3. Actor: Sports analyst/Betting coach

Name: Giovanni Giorgio
Experience: 2 years
Someone who is active in sports betting and talks about their picks often could benefit from being able to use a sports betting bot to help them with their picks. They could also make their predictions faster because they would need less research if they can rely more on the bot.

5. Provide two examples of risk that could potentially impact this project. Explain how you would mitigate these risks if you were implementing your project as a software system.

One potential problem with this system is data collection and processing, although data is abundant and could be easily accessed, this data needs to be processed and updated regularly. Sports bots need to be updated with the latest stats. We could mitigate this risk by updating data using an automated process. Google offers APIs where we could fetch live sports updates from.

One potential problem we may have is the insertion of malicious data into the program which will skew results by messing up the algorithm used to make predictions. We have to ensure that the data that is used by the system or the prediction model itself cannot be tampered with.

6. Describe which process your team would use for requirements elicitation from clients or customers, and explain why.

For our sports analytics bot project, the Agile methodology particularly Scrum would be the most suitable, and here are some of the reasons why we will choose it -

- Frequent feedback and adaptability
- Collaborative environment
- Flexibility in changing requirements
- Faster time to market
- Transparency and client involvement
- Prioritization of work