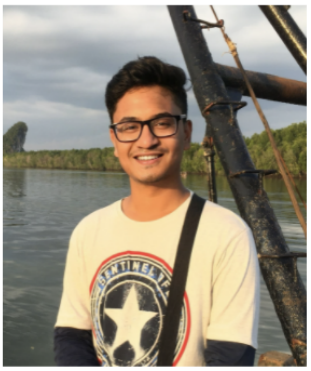
APPLIED DATABASE TECHNOLOGIES

PROJECT PROPOSAL

FIFA FANTASY

PROJECT MEMBERS: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Project Summary

Using a dataset from Kaggle containing records for each player and their attributes in the Fifa Video Game during the 2019-2022 Version, our database application will provide an interactive attribute summary aimed at FIFA enthusiasts who are interested and can use data to learn about historical comparisons of players and to create their own competitive team. The data also allows multiple comparisons for the same players across the last 3 versions of the videogame.

Project Description

- **Objectives:**

The objective of this project is to create a user-friendly website for the users to retrieve statistics of the different players or different variants of players across the FIFA platform for the analysis and create their own competitive team and compare with others.

  - To allow users to have a seamless experience when looking at all their FIFA players of interest.
  - FIFA being a major attraction for today's youth, our main aim towards taking this dataset was to ensure that our fellow classmates, TAs, and professors enjoy reading through it and compare players on multiple parameters in the last 8 versions of the videogame.
  - Give users the accessibility to see all the existing FIFA players and give them reviews/recommendations/features all in one place
  - At the end of this project, we plan on learning how to interact with data: the basic CRUD(Create, Read, Update and Delete) operations and visualizing the results.

- **Usefulness:**

Fantasy football is **an $18.6 billion market**. In recent years, the hype for fantasy platforms for sports has gone really high. We can find similar platforms online like fantasy football for some specific top leagues. Moreover, we can also see similar platforms in other sports. The trend we have observed is uniqueness, as every league has its own fantasy app or website for the users to compete in. We are creating an application that provides users with a common platform to include the football players from the top leagues and create their own fantasy team. The main user target is going to be football enthusiasts and teenagers interested in sports Video Games. The main reason is that it's fun to compete against friends or coworkers on a seemingly level playing field. Fantasy football gives us something to talk about throughout the season, and almost anyone can do it, even if we aren't in shape to play actual football.

- **Dataset:**

The Dataset has been taken from Kaggle, where it was uploaded by Stefano Leone and scraped from the publicly available website **sofifa.com**. We have extracted the football players' data in the Fifa 2020- 2022 game. The dataset contains a total data point of approximately 60,000.

Link: https://www.kaggle.com/stefanoleone992/fifa-22-complete-player-dataset?select=players_22.csv

In total, the dataset includes 110 attributes of a player. Some attributes are mentioned below:

- ➢ Every player available in FIFA 20, 21 and 22
- ➢ URL of the scraped players
- ➢ URL of the uploaded player faces, club and nation logos
- ➢ Player positions, with the role in the club and in the national team
- ➢ Player attributes with statistics as Attacking, Skills, Defense, Mentality, GK Skills, etc.
- ➢ Player personal data like Nationality, Club, DateOfBirth, Wage, Salary, etc.
- ➢ The mean age of the players is 25.2 with a standard deviation of 4.7 years.
- ➢ The average player's overall rating is 65.7 with a standard deviation of 7 points.
- ➢ The average player weekly wage (in EUR) is 9.15k with a standard deviation of 19.9k.

The dataset does contain null values in columns like club_loaned_from, player_tags, nation_logo_url, etc. and these are optional features so we can drop them or we can easily fill in for the null values. The dataset will require cleaning so that when we fetch our results and null values come up, this is going to degrade the quality of our website.

- **Description of the functionalities:**

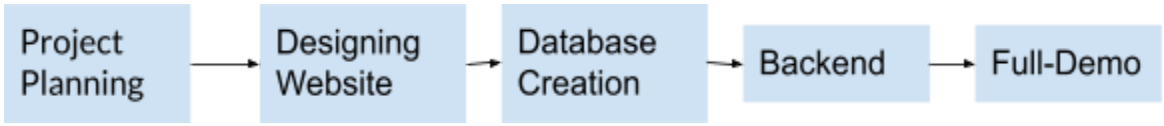
Basic Functions:

- ➢ **Insert**: The insert function can be used to insert the player in the user's squad. An interactive GUI can be created to showcase a holistic summary for a player.
- ➢ **Update**: An update function can be applied in the user-created team, where after creating a team. A user can also update the player to improve or change the player of his/her/they choice.
- ➢ **Delete**: User can create multiple teams/squads, an update function can be used to delete any specific or a number of squads from user profile.
- ➢ **Select**: A select function can be used to search and select a player. An interactive GUI can be created to showcase a holistic summary for a player.

Advanced Functions: For example, compound queries, visualization, statistical analysis, prediction etc

- ➢ When searching for a player, instead of just giving out plain answers to the query or button click we can visualize it and give output in a more appealing way.
- ➢ We will be collating the three years' data so we can visualize the difference between each player, each team statistically.

- **<u>Task Divisions and Development Plan:</u>**



Keshav will handle the designing part of the project like player profile, statistics summary, visual elements of a fantasy team, Aditi and Nikunj will work on the back-end utilizing python and linking the database to the webpage. Writing query and coding will be done by all three of us together, while continuously pushing the updates to git.

- **<u>Communication and Sharing</u>:** Our preferred method of communication would be zoom. Since all three of us are located in Bloomington, IN, we would also meet periodically every weekend to brainstorm and complete the project.

- **<u>Milestones</u>:**
    - Week 8 - project planning - COMPLETE
    - Week 10 - database
    - Week 13 - web app mock
    - Week 16 - full demo