

## Computer Science - Term **Group** Project #2 2023

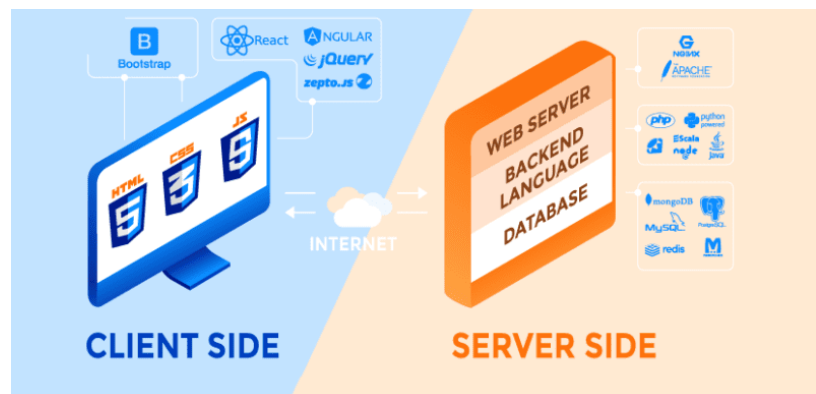
In addition to learning important coding skills and developing a sense for the unlimited potential computers have to solve problems and build cool stuff, this course aims to give you experience of **programming within a group**. Tackling computer science challenges in a **group** helps you in the following important ways:

1. Develop stronger **communication** skills. 
2. Learn the **dynamics** of working effectively within a **team**. 
3. **Learn** programming skills **faster**. 
4. **Engage socially**. 
5. Be **accountable** and **have a purpose** to your work. 

You will complete the following exercise as part of a team of 2-3 individuals. The project will be **due: Monday June 5<sup>th</sup>**. This gives you approximately 5 periods to complete. Depending on the progress and goals of your group, **you may need to work outside of class time**.

Each group will **present their final product on June 5<sup>th</sup>** to the class. You may create your own groups. Prizes will be awarded to the best products. Mr. Walzl may or may not steal your ideas and publish them as his own in order to make millions of dollars.

Our focus for this project will be to use **Python** to help make a website more interactive. Although **JavaScript** is available to help design functional websites, it is overwhelming language to learn. Many websites can gain functionality, by using languages like **Python** or **C** in the background (the server side of a website). Data is transferred from the user to a **program on a server** and then output is communicated back to the user on the website. In this project you can you **py-script** that allow you to run python directly in the browser to perform complex tasks.



Your task: **Build an Online Casino**

build a **webpage** that will allow a user to play 2 or more simple casino games. Your online casino must include the following **minimum** requirements:



- An engaging landing page (title page) that includes animations and allow the user to make selections.
- Allow the user to select a game they wish to play.
- 2 simple casino games (the easiest would be a slot machine and roulette table).
- Your game play must be controlled by python script this can be done using py-script or any other method you wish. See Mr. Walzl's Online starter example to see how py-script works.**
- Allow users to bet money. Players should have initial total that will be added to (or subtracted from) according to the outcome of the games and wagers they bet. Note the preceding were the *minimum* requirements. This will only give you 30/60. Your group is attempting to make the **best casino game you can make.**

You **must** include **two or more** of the following (or other cool features) **for full marks:**

- A *more* than 2 casino games.
- Animations** that make the user's experience more "fun" engaging. Examples:
  - Motion of games (slots, spinning roulette etc).
  - animations to that celebrate wins or announce losses
- Audio**
- Story or narrative elements to engage the user.
- Carefully designed goals, bonuses, and pitfalls used to engage the user.



### Marking Scheme:

Team worked effectively and ensured significant contributions by each member:	<b>10 marks</b>
Minimum requirements for game have been met:	<b>20 marks</b>
Presentation of product organised, clear, informative, professional:	<b>10 marks</b>
Inclusion of more advanced features of the game:	<b>20 marks</b>

## Helpful hints for working on coding projects in groups:

1. At the beginning of the project create a systematic way for everyone to contribute, take your time, brainstorm. Go around and let **each person speak**. Each person should have a turn to give input. Don't judge or critic anyone's initial ideas.
2. Once some ideas appear, **identify goals and problems that need to be solved**. Write these down. **Designate someone as a note taker** who can record ideas, tasks and schedules that are visible and organised for everyone to see.
3. Break the project down in as many smaller tasks as you can and assign them to each member.
4. **Communicate regularly**, check in at the beginning and end of each session (or more frequently) to see where everyone is at. Who needs help? Do changes need to be made? Always refer to and modify your notes/schedule.

