Practical 03 – HTML, CSS and JavaScript
Out of 10 Marks

DUE: 2022-03-25 before 23:59

IMPORTANT NOTES:
- This is an individual micro practical.
- Practical work is based on assessment objectives.
- If an objective has been achieved a mark will be allocated.
- All micro practical activities conceptually (based on skills) feed into one or more homework assignments.
- By completing the practical work you will be learning the necessary skills to complete homework assignments.

INSTRUCTIONS:
- For this practical you will receive specific instructions that you need to follow.
- When uploading the practical homework, zip the entire project and then please upload it using the following naming convention. **Source Code:** Zip your source code files together and name it **uXXXXXXXX_PR03.zip**, where the XXXXXXXX is your student number, e.g., u12345678_PR03.zip.

SUBMISSION DEADLINE: 2022-03-25 before 23:59
- There shall be no extensions to the deadline.
- If practical work submissions are uploaded too late then upload errors WILL happen.
- Do not wait to the last minute to complete the practical assignments.
- Start working on the practical work as soon as it is posted.
- Verify the completeness of your upload.
- There are multiple upload opportunities enabled if your upload is incomplete.
- Incomplete uploads will be considered unsubmitted work.
- E-mail submissions WILL NOT be accepted.
- Late submissions WILL NOT be accepted.
- **NO EXCEPTIONS WILL BE MADE FOR ANYONE.**

1. TOOLS, SKILLS, KNOWLEDGE REQUIRED:

Use the files in the folder uploaded on ClickUP ("PR03"), to complete the following exercises. You will be using HTML, CSS, JavaScript and Visual Studio Code to complete the practical.

2. STANDARD REQUIREMENTS:

The following is a list of <u>mandatory requirements</u>.

1. Create the game Paper, Scissors, Rocks. The user chooses one of these and so does the computer. Depending on their choice either the user or the computer wins. The rules of the game are as follows:
   Scissors overpowers paper
   Paper overpowers rock
   Rock overpowers scissors

   The interface is already provided and is shown below. You are welcome to add a CSS file to improve the look and feel.

   ## Computer Choice:

   ## Your Choice:

   ## Result:

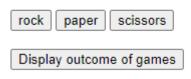 | rock | paper | scissors |

   | Display outcome of games |

   List of results: None yet

   When the user clicks on any of the buttons, the choice must display next to the words "Your Choice" and at the same time the Computer Choice must also be displayed. The result of the game must be displayed next to "Result:". See below:

   ## Computer Choice: rock

   ## Your Choice: rock

   ## Result: its a draw!

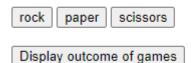 | rock | paper | scissors |

   | Display outcome of games |

   List of results: None yet

2. **OPTIONAL**: In addition, when the user clicks on "Display outcome of games", a summary must be provided of the outcome of all the round of games played in one sitting. In the example below, the user played three times.

Computer Choice: rock

Your Choice: scissors

Result: you lose!

| rock | paper | scissors |

| Display outcome of games |

List of results:

- round number 1: its a draw!
- round number 2: its a draw!
- round number 3: you lose!

To create the history of outcomes, create an array of objects where the objects consists of the following 2 properties: round number and result.

3. RESEARCH / READING REQUIREMENTS

The following is required reading and / or research (see w3schools).

- The slides and examples done in class
- You must use at least one switch statement in the code, use the random number generator and the target event property.
- Try to write each of the functions you defined in function arrow expression as well. – and comment out.

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Checklist Use the checklist as a script that would allow you to sequence coding.	**MAX**
1. User choice is correctly identified and displayed (use target event property)	3
2. Computer choice is generated using random number (separate function, use Math.random(), Math.floor() and switch statement)	4
3. User choice and computer choice are compared and outcome is returned. (separate function, if statements)	3
4. Objects with the round number and result of the games are created and pushed to array. Hint: create a separate function for this.	
5. Unordered list is created with the different rounds and outcomes. Hint: Create a separate function for this. Use a for loop to iterate through the different objects and build a string (the unordered list).	
6. Unordered list is displayed with the different rounds and outcomes. Hint: create a separate function for this. Create a click event handler for the "Display outcome of games" which calls a function to display the string.	
TOTAL MARK ALLOCATION	**10**