CS6.302 - Software System Development

Assignment 2 – HTML, CSS & JavaScript

Due: 27 September 2025, 05:00 PM

Total Marks: 50

NOTE: This assignment is an individual submission, not a group activity. Evaluation will be conducted based on a fixed grading rubric (syntax, logic, input and output) and the marks are divided as per prescribed weightage in respective question. Inputs/output should fit the criteria mentioned in respective questions. Unless it is specified, all input/output criteria are open to interpretation. All questions in the assignment are self-explanatory. Do not reach us for any clarifications. If you are answering a question based on a certain assumption, please feel free to mention it as part of your README file.

Submission Instructions:

Please submit your code in Moodle. You are required to submit the assignment as <roll_number>A2.zip. Fort example, if you roll number 20162153, then your submission file should be 20162153_A2.zip. The submission ZIP file should contain two folders, Q1, Q2, Q3, Q4, Q5 with each folder containing scripts and any supporting files associated with these questions. Please do not forget to include a README.TXT file to mention your assumptions, execution instructions or anything else in the ZIP. If you are using any LLM for this task, please declare your usage with all required details here - https://forms.office.com/r/754tAUacRk If you are found not mentioning about your LLM usage despite using one, you will be awarded '0'. You will be awarded '0' if your submission is found to be plagiarized with other submissions.

Q1: Pickup your submission from Class Activity (Personal Website Creation) and host it in github.io page. **(1 Marks)**

Q2: Use CSS/JavaScript to transform the ugly single page SSD course website without losing any existing information. Host the transformed webpage under your github.io page as newssd.html. **(4 Marks)**

Q3: Using JavaScript, create a single page –single player Jigzaw Puzzel maker. Allow the user to upload an image, allow to break the image into difficulty level (5/20/40/80/100 pieces) and let the user complete the Jigzaw puzzel. **(5 Marks)**

Q4: Implement two-player (computer & human) 'Stoplight Game' to illustrate Nash Equilibrium by providing random inputs to determine the outcomes. Include comment tag to describe each line of your program **(10 Marks)** Source: https://www.youtube.com/watch?v=0i7p9DNvtjk&t=142s

Q5: Implement a single page Data Dictionary tool for relational database, that reads the table schema definition and table relationship as input (json/xml/any other format) and generates a table-table relation diagram as a glossary. Make this tool usable i.e. provide instruction to the user on how to generate input from his own databases and generate HTML/PDF version of the data dictionary & table-table relation diagram. **(10 Marks)**

Q6: Create a JavaScript function that can capture all click events and page views performed by a user across HTML tags and CSS Objects. Print the output on console on your local browser as for Q1, Q2, Q3, Q4, Q5 implementations. **(5 Marks)**

- Timestamp_of_click/view, type_of_event (click/view), event_object (drop_down/image/text etc.)

Q7: Implement Bowling Alley game using AframeJS or Threejs using these Rules. **(15 Marks)**

_(-_-)_/ Happy -_- Programming!