Rubric for Project Management Process

| **Criteria** | **Level 4** | **Level 3** | **Level 2** | **Level 1** |
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| **Initiation**  **C/T** | * All sections were completed in great detail * Excellent document layout, very clear and easy to understand   **10 9 8** | * All sections were completed in good detail * Very good document layout, clear and easy to understand   **8 7.5 7** | * Some sections were completed in good detail * Good document layout, clear and easy to understand   **7 6.5 6** | * Only a few sections were completed * Document lacked organization and was difficult to understand   **5 4 3 2 1 0** |
| **Planning (C/T)**  **&**  **Algorithm Design**  **C/T** | * Gantt charts are created with a high level of detail with estimated dates * All tasks are broken down in detail and evenly distributed   **10 9 8** | * Gantt charts are created with sufficient detail and accurate dates * All tasks are broken down and evenly distributed   **8 7.5 7** | * Gantt charts are created with a high level tasks breakdown and estimates * Most tasks are broken down and distributed   **7 6.5 6** | * Gantt charts are created with estimates, however, lacking in detail and accuracy * Only a few tasks specified and distributed evenly   **5 4 3 2 1 0** |
| * Algorithm provides all steps in great detail * Demonstrates insightful understanding of the task * Algorithm uses very efficient methods   **10 9 8** | * Algorithm provides all steps in good detail * Demonstrates good understanding of the task * Algorithm uses efficient methods   **8 7.5 7** | * Algorithm provides adequate steps in minimal detail * Demonstrates adequate understanding of the task * Algorithm uses fairly efficient methods   **7 6.5 6** | * Incomplete algorithm providing minimal steps that lacked detail * Demonstrates minimal understanding of task * Algorithm uses inefficient methods   **5 4 3 2 1 0** |
| **Executing**  **A** | * Students are using class time wisely and are on task ensuring project timelines are being met   **10 9 8** | * Students are usually using class time wisely and are mostly on task ensuring project timelines are being met   **8 7.5 7** | * Students are somewhat using class time wisely and are somewhat on task ensuring project timelines are being met   **7 6.5 6** | * Students are occasionally using class time wisely and are occasionally on task ensuring project timelines are being met   **5 4 3 2 1 0** |
| **Monitoring and Controlling**  **A** | * Detailed evidence provided for monitoring project variables and schedule against the project plan * Corrective actions clearly documented and taken to address issues   **10 9 8** | * Evidence provided for monitoring project variables and schedule against the project plan * Corrective actions documented and taken to address issues   **8 7.5 7** | * Some evidence provided for monitoring project variables and schedule against the project plan * Some corrective actions documented and taken to address issues   **7 6.5 6** | * Little evidence provided for monitoring project variables and schedule against the project plan * No corrective actions documented and taken to address issues   **5 4 3 2 1 0** |
| **Closing** | | | | |
| **Group Dynamics, Interactions, and Communication**  **C/T** | * Reflection was transparent and revealing adequate details about challenges and strengths of the dynamics of the group   **10 9 8** | * Reflection was somewhat transparent and revealing adequate details about challenges and strengths of the dynamics of the group   **8 7.5 7** | * Reflection was vague and provided limited detail about challenges and strengths of the dynamics of the group   **7 6.5 6** | * Reflection was unclear and did not provide details about dynamics of the group   **5 4 3 2 1 0** |

**T /40 C /40 A /20**Rubric for Connect Four Application

|  | **Level 4** | **Level 3** | **Level 2** | **Level 1** |
| --- | --- | --- | --- | --- |
| **Coding Standards**  **C** | * Includes name, date, and assignment title. * Excellent use of white space. * Creatively organized work. * Excellent use of variables (unambiguous naming). * Fully indented and braces matching * Excellent use of methods   **5 4.5 4** | * Includes name, date, and assignment title. * Good use of white space. * Organized work * Good use of variables (, unambiguous naming) * Mostly Indented and braces matching * Good use of methods   **4 3.5 3** | * Includes name, date, and assignment title. * White space makes program fairly easy to read. * Organized work. * Good use of variables (unambiguous naming). * Some indented and braces matching * Some use of methods   **3 2.5 2** | * No name, date, or assignment title included * Poor use of white space (indentation, blank lines). * Disorganized and messy * Poor use of variables (ambiguous naming). * Minimal indentation and braces matching * Minimal use of methods   **2 1.5 1 0** |
| **Documentation**  **And Commenting**  **C /5** | * Clearly and effectively documented including descriptions of all variables. * Specific purpose for each function, control structure, input requirements, and output results   **5 4.5 4** | * Clearly documented including descriptions of all variables. * Specific purpose is noted for each function and control structure.   **4 3.5 3** | * Basic documentation has been completed including descriptions of all variables. * Purpose is noted for each function.   **3 2.5 2** | * No documentation included   **2 1.5 1 0** |
| **Runtime**  **A /5** | * Executes without errors excellent user prompts, good use of symbols, spacing in output. * Thorough and organized testing has been completed and output from test cases is included.   **5 4.5 4** | * Executes without errors. * User prompts are understandable, minimum use of symbols or spacing in output. * Thorough testing has been completed   **4 3.5 3** | * Executes without errors. * User prompts contain little information, poor design. * Some testing has been completed.   **3 2.5 2** | * Does not execute due to errors. * User prompts are misleading or non-existent. * No testing has been completed.   **2 1.5 1 0** |
| **Efficiency**  **T /5** | * Solution is very efficient and easy to understand   **5 4.5 4** | * Solution is efficient and easy to follow.   **4 3.5 3** | * A logical easy to follow and somewhat efficient solution   **3 2.5 2** | * A difficult and inefficient solution.   **2 1.5 1 0** |
| **Connect Four GUI Interface**  **A** | * Extensively applies GUI interface and 2D arrays to create a very user friendly and functional program   **10 9 8** | * Sufficiently applies GUI interface and 2D arrays to create a user friendly and functional program   **8 7.5 7** | * Applies GUI interface and 2D arrays to provide a somewhat user friendly and functional program   **7 6.5 6** | * GUI and functionality is limited   **5 4 3 2 1 0** |
| **Program Functionality**  **Player vs. Player**  **A** | * Allows both player vs. player and player vs. AI options * Always reports results for player vs. player and player vs. AI * Includes additional complex functions (e.g., save a result, max number of moves, timer, etc)   **10 9 8** | * Allows both players vs. player and player vs. AI option * Reports results for player vs. player   **8 7.5 7** | * Allows both players to take turns * Usually reports the results of the game, including a tie   **7 6.5 6** | * Allows both players to take turns * Sometimes reports the result of the game   **5 4 3 2 1 0** |
| **Artificial Intelligence**  **T** | * Level 3 + (the following): * Use some strategy based on future game states (e.g. minimax) * Tournament results   **10 9 8** | * Level 2 + (the following): * AI has some strategy based on the current game state to connect 3 or 2 * AI has some other strategy involved (e.g. centre moves are often better)   **8 7.5 7** | * AI will make Connect 4 whenever possible or block opponent from making Connect 4   **7 6.5 6** | * AI chooses random spot to place game piece and does not break the game   **5 4 3 2 1 0** |

**T/I: /15 C: /10 A: /25**