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| https://upload.wikimedia.org/wikipedia/commons/thumb/4/4e/VU_Logo.png/260px-VU_Logo.png | **Artificial Intelligence Practical (CS607P)**  Assignment # 01  **Spring 2024** | **Total marks = 10**  **Deadline**  **29th of April 2024** |
| **Please carefully read the following instructions before attempting the assignment.**  **RULES FOR MARKING**  **It should be clear that your assignment would not get any credit if:**   * The assignment is submitted after the due date. * The submitted assignment does not open or the file is corrupt. * Strict action will be taken if the submitted solution is copied from any other student or the internet.   **You should consult the recommended books to clarify your concepts as handouts are not sufficient.**  **You are supposed to submit your assignment in Doc or Docx** **format.**  Any other formats like scan images, PDF, ZIP, RAR, PPT, BMP, etc. will not be accepted.  **Topic Covered:**   * Introduction of Artificiall Intelligence * Search Strategies * Breath First search (BFS) and Depth First Search (DFS)   **Topic Covered**  Lecture 01 to Lecture 10 | | |
| **NOTE**  No assignment will be accepted *after the due date via email in any case* (whether it is the case of load shedding or internet malfunctioning etc.). Hence refrain from uploading assignments in the last hour of the deadline. It is recommended to upload the solution at least two days before its closing date.  If you people find any mistake or confusion in the assignment (Question statement), please consult with your instructor before the deadline. After the deadline, no queries will be entertained in this regard.  **For any query, feel free to email me at:**  [**CS607P@vu.edu.pk**](mailto:CS607P@vu.edu.pk) | | |

**Question** **Marks (10)**

Breath First Search (BFS) is a memory hungry search strategy that means it requires a lot of memory whiling processing a problem even having a reasonable and moderate complexity. It is primarily due to the branching factor that increase the number of ways to search for the solution (goal/target).

Now, consider that we have a tree with the branching factor of 9 and depth (or height) 11, while each node of requires 20 bytes storage. If the Breath First Search (BFS) is applied on this tree, calculate the memory required for this search.

**Note:** You should provide the storage in Bytes (B), Kilo Bytes (KB), Mega Bytes (MB) and Giga Bytes (GB).

**Hint:** You should listen at least first 8 lectures of CS607 course thoroughly.

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