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**Class: BSDS 3A**

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**TASK 7**

**Code Explaination:**

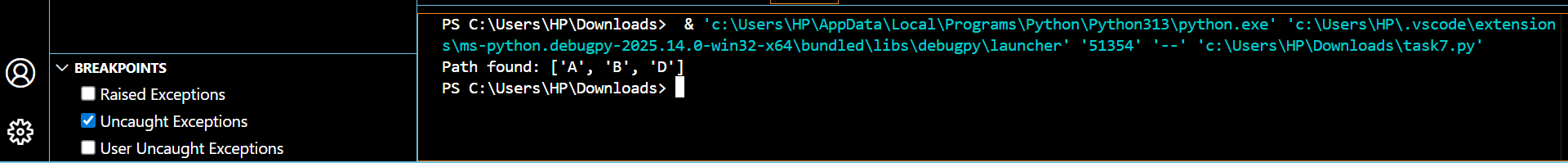
Write code for A\* Algorithm:

**How:**  
A\* picks the node with the **lowest f(n) = g(n) + h(n)**, where

* **g(n)** = cost from start to current
* **h(n)** = estimated cost to goal.  
  It explores neighbors, updates costs, and reconstructs the path once the goal is found.

**Why:**  
Because combining actual cost (g) and heuristic (h) lets A\* find the **shortest path efficiently**, exploring only the most promising nodes first.

**Output:**

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