Advanced Algorithms - Assignment 1

Name:

USN:

**Instructions:**

* *This document must be submitted along with your implementation file.*
* *You are required to run at least 3 test cases with your implementation and fill in the tables given.*
* *You may add more columns in case you have run more test cases*
* *Reallocation threshold is the percentage of the array filled after which your implementation reallocates memory*
* *Deallocation threshold is the percentage of the array emptied after which your implementation deallocates memory.*
* *Vary the thresholds in the test cases and note the time taken for the basic operation*
* *The final section is optional and can be used if you would like to give the evaluators additional information about your assignment*

**1) Dynamic Table with Structure Hacking**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Test Case 1 | Test Case 2 | Test Case 3 |
| Reallocation Threshold |  |  |  |
| Deallocation Threshold |  |  |  |
| Number of times copy was called |  |  |  |
| Total time |  |  |  |
| Average time taken |  |  |  |

**2) Dynamic Table without Structure Hacking**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Test Case 1 | Test Case 2 | Test Case 3 |
| Reallocation Threshold |  |  |  |
| Deallocation Threshold |  |  |  |
| Number of times copy was called |  |  |  |
| Total time |  |  |  |
| Average time taken |  |  |  |

**3) Splay Tree**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Test Case 1 | Test Case 2 | Test Case 3 |
| Number of rotations |  |  |  |
| Total time |  |  |  |
| Average time taken |  |  |  |

**4) Additional details:**