Theory Assignment-2: ADA Winter-2024

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1 Subproblem Definition

2 Recurrence of the Subproblem

3 Subproblem(s) that Solves the Actual Problem

4 Algorithm Description

Algorithm 1 Dynamic Programming Algorithm for Maximum Value

```
1: function MaxChicks(A, idx, n, tup)
2:     key ← create_key(idx, tup)
3:     if memo contains key then
4:         return memo[key]
5:     end if
6:     if idx = n − 1 then
7:         return calculate_base_case(A, idx, tup)
8:     else
9:         return calculate_recursive_case(A, idx, n, tup)
10:    end if
11: end function
```

5 Running Time of the Algorithm

6 Pseudocode

Algorithm 2 Your Algorithm

1: **function** YourAlgorithm(input parameters)
2: **end function**

7 Proof of Correctness

8 Assumptions

- While converting this pseudocode to the code of your desired language, please make sure to pass the "tup" vector by value and not by reference.
- Initialise "tup" as -1, -1, -1 in the main function.